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# The CHEMIST AND DRUGGIST

for RETAILER - WHOLESALER - MANUFACTURER

Established 1859

28 Essex Street, Strand, London, W.C.2

Registered as a Newspaper

No. 3075  
VOL. CXXX

JANUARY 14, 1939

Annual Subscription (with  
Diary) 20/- Single Copies 9d.

*Halivamin*  
BRAND  
VITAMIN TESTED

## HALIBUT LIVER OIL PRODUCTS

Prepared from finest Halibut Liver Oils standardized to contain 30,000 International Units Vitamin A and 1,500 International Units Vitamin D per gramme. Neat and attractive get-up; showcards for each product and smart display stand for Malt and Oil.

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Flat boxes of 25	-	-	retail	1/3
50	-	-	"	2/-
Tins of 100	-	-	"	3/9

### EMULSION with Calcium Gluconate

6 oz. with Calcium Gluconate	retail	1/6
12 " " " "	"	2/9
Both Halibut Liver and Calcium Gluconate are, individually, valuable curative agents; in combination their therapeutic properties are enhanced and exerted to a marked degree.		

### OIL with Orange Juice

6 oz. amber cartoned bottles	retail	1/9
12 " " " "	"	3/-

Pharmacists' discount 33 $\frac{1}{3}$ %

★ Details of Bonus Offer and specimen pack on application.

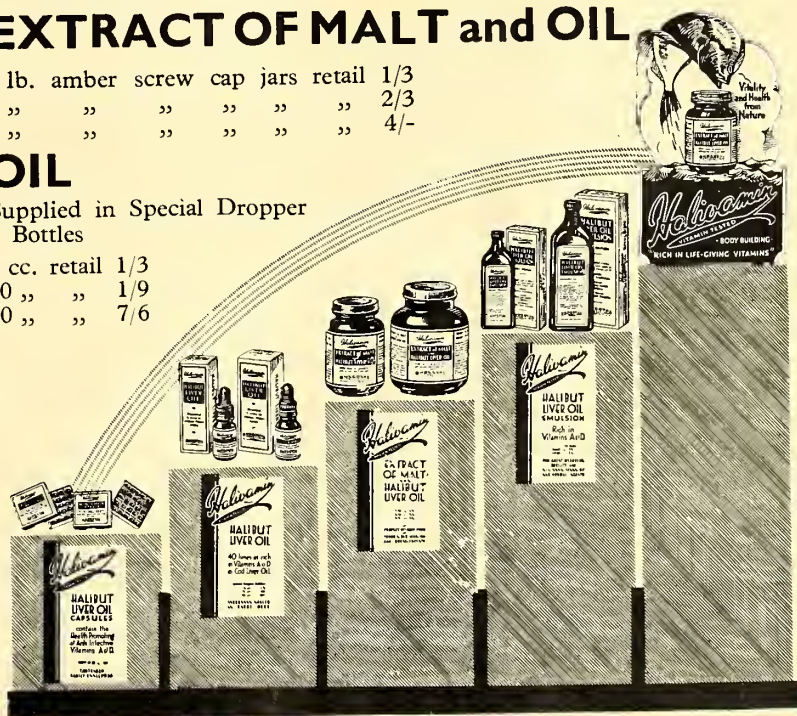
### EXTRACT OF MALT and OIL

1 lb. amber screw cap jars	retail	1/3
2 " " " "	"	2/3
4 " " " "	"	4/-

### OIL

Supplied in Special Dropper Bottles

5 cc. retail	1/3
10 " "	1/9
50 " "	7/6



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LONDON E.6. EST. 1741.



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HARLENE HAIR CREAM

HARLENE <sup>Soapless</sup><sub>Brushless</sub> SHAVING CREAM

HARLENE SCALP OINTMENT

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ENGLAND BY

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BRUSH WORKS  
HERTFORD

ESTABLISHED 1780

**ORDER FROM YOUR WHOLESALE**





$\frac{1}{4}$ lb.	9 <sup>D</sup>
$\frac{1}{2}$ lb.	1/5
1 lb.	2/9

**FOR DIGESTION  
SLEEP & ENERGY**

**YOU CAN SAFELY RECOMMEND**

*Cadbury's*

**BOURN-VITA**



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**ANTIPNEUMOCOCCIC SERA**

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TYPES 1, 2, 4, 5, 7 AND 8

WITH A RESULTANT SAVING of over 4,000 lives  
annually in England and Wales.

IN RECENT YEARS an average of 10,000 deaths per  
year have been attributed to lobar pneumonia alone.

Calculating from the known relative frequencies  
of the individual pneumococcus types, and from the  
mortality rate when no serum is given, 22,500 cases  
and 6,700 deaths are caused by Types 1, 2, 4, 5, 7,  
or 8, pneumococci.

19 out of every 31 deaths can be avoided\* by ade-  
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first four days of illness; in other words, more than  
4,000 of these deaths are preventable.

Potent, refined and concentrated "Antipneumo-  
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Bivalent Types 1 & 2 10,000 units each type 20,000 units each type	

A survey of the literature indicates that the types  
enumerated here are responsible for more than  
70% of all cases of pneumococcic infection, no  
matter how manifested (lobar or bronchial pneu-  
monia, empyema, etc.).

\*Horsfall, F. L., Canadian Pub. Health J.; October, 1937.

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*March to come!*

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 In Drab or Red. Packed  
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Retail 4/11 to 6/11  
 Trade 3/3 to 4/7½  
 P.A.T.A. Price-Protected

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A new de luxe bottle.  
 In Blue, Green or Red.  
 Packed singly in de-  
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**EDINA**

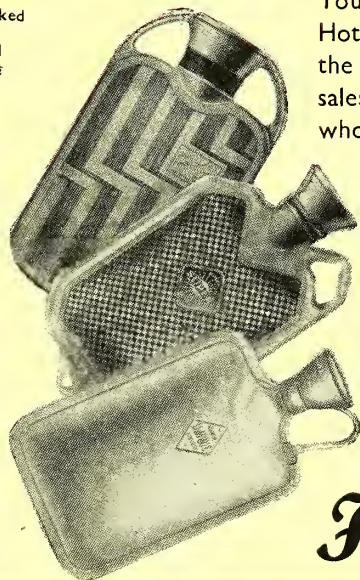
Obtainable in Blue,  
 Green or Cherry. In  
 transparent envelope.

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 Trade Price 1/11½ each  
 P.A.T.A. Price-Protected

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 Packed in transparent  
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*Hot Water Bottles*

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1. It provides the nearest substitute for the natural oil necessary to the roots of the hair.
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3. It is used by adults and children not only as a hair tonic but as a beauty preparation.
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5. It means bigger profits and larger turnover to you.
6. It is packed in attractive wrappers and counter display boxes to assist sales.

Send for full details and attractive counter cards.

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## and then you will know

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We know that if a dealer uses a "SPEEKO" himself he will be so satisfied that he will impart his enthusiasm to his customers and bring off many sales.

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—31/6—cash with order.

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5 SPEKE HALL RD., LIVERPOOL





## Does she buy them from you?

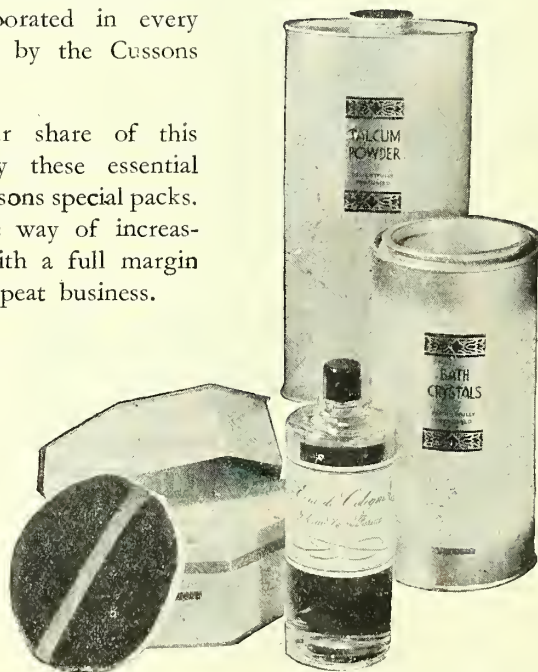
DO you know that of the annual £17,000,000 spent in Toiletries nearly half is expended on Toilet Soap, Toilet Waters and Toilet Powders? Does the woman who comes into your Store buy hers from you?

To-day she demands quality, tasteful pack and value—three items that are incorporated in every pack produced by the Cussons organisation.

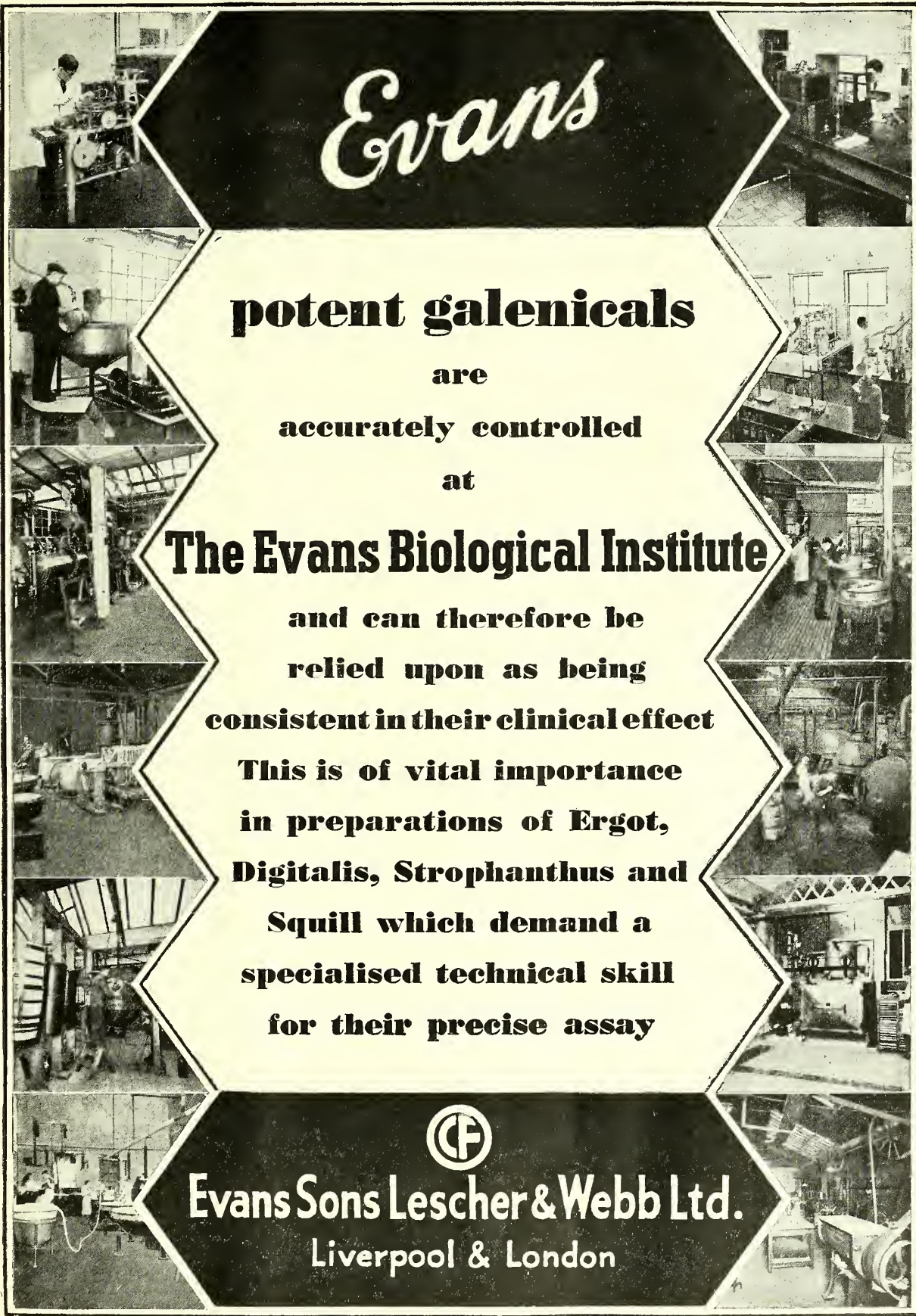
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**This is of vital importance**

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**Squill which demand a**

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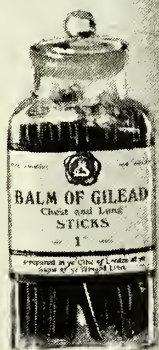
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LUNG-CHESTER  
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4/- per doz.  
6 doz. 3/9



COLTSFOOT ROCK  
4 oz. bags  
3/6 per doz.



BALM OF  
GILEAD  
1d. sticks—  
7/- gross



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GLUCO-BARLEY SUGAR  
1d. sticks—7/- gross



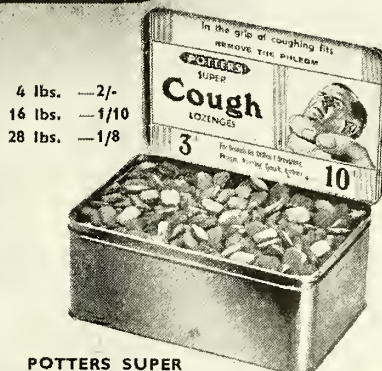
BROMPTON LOZENGES  
2d. rolls—12/- per gross



BALM OF GILEAD  
PASTILLES



CREO-PINE PASTILLES  
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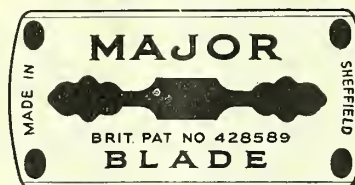
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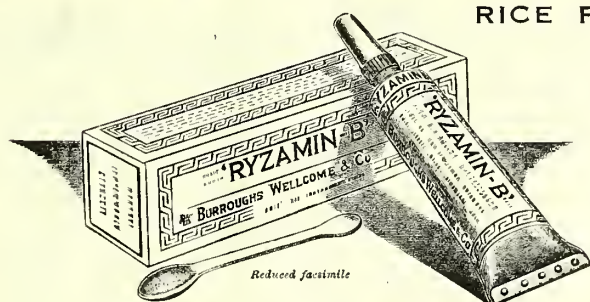


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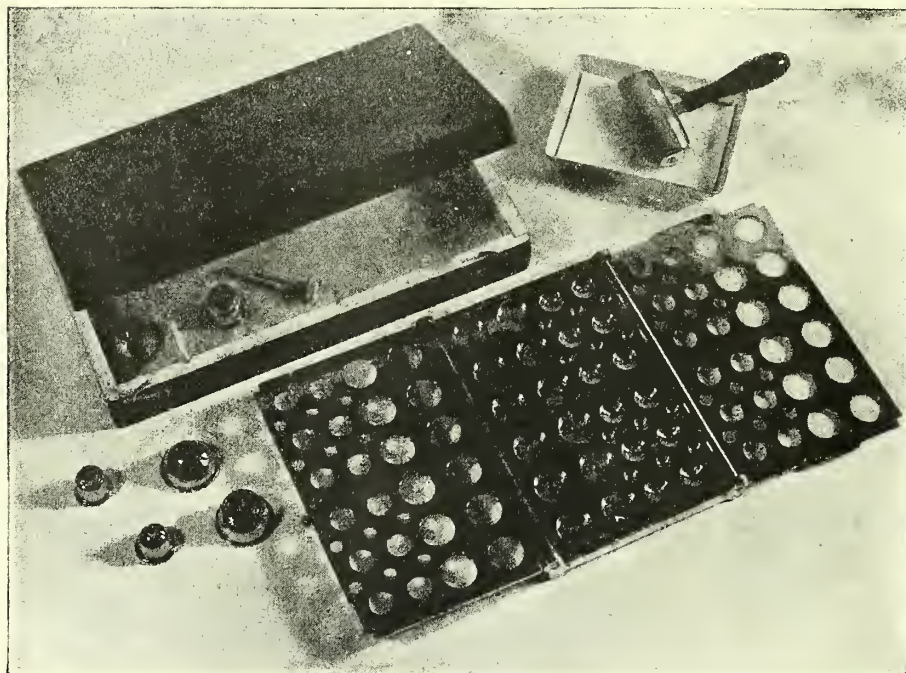


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## News of the Week

### Photographic Centenary Exhibition

An exhibition is to be opened at the Victoria and Albert Museum, London, on January 25, in celebration of the centenary of the discovery of photography. The exhibition will include items associated with both Daguerre (see also pp. 28 and 39) and William Henry Fox Talbot, whose work was described in a paper read to the Royal Society in London on January 30, 1839, although a centenary celebration of the latter's experimental work dating back to 1835 has previously been held (see *C. & D.*, 1935, II, 558).

### Pharmaceutical Society's Centenary Fund

The following appeal has been issued by Mr. T. Guthrie, president of the Pharmaceutical Society, and Mr. T. Marns, chairman of the Appeal Committee:—

The foundations for our new house are being dug on our own land in Brunswick Square, and already you who are members of the Society are taking a warm interest all over the country in its progress. It has been said that this building needs enthusiasm as well as bricks and mortar. That enthusiasm is now assured, and the time has come for us to enable you to give practical effect to your interest by subscribing to the Centenary Fund. The building is going up. If you support the Centenary Fund generously it will mean the difference between the best and the second best in our new home. So we earnestly appeal to you for as generous a contribution as you can make. Already handsome subscriptions have been promised by some houses whose names are household words in pharmacy, and we who are members must be no less generous. The project has been carefully examined by a distinguished committee of the Court of the University of London, which has warmly commended it to the pharmaceutical industry and profession. National committees have been set up for Wales and Scotland, and it is clear that a very substantial response from our members is already assured. We do, however, want to see every Branch and every member having some part in it. This is not a London building; it is a building for every pharmacist in the whole of Great Britain and for every British pharmacist overseas. In it the traditions and the aspirations of our calling must be worthily expressed, and to realise this we want all of you, through the Fund, to put something of your own into its structure. In due course you will receive a form to use when making your contribution. It will enable you to allocate your subscription, if you wish to do so, to the Scottish or the Welsh national appeal, while at the same time having it credited to your Branch. We have called this the Centenary Fund. We think of the founders of our Society who, with all their enthusiasm, faith and vision, could never have foreseen the vigorous and flourishing organisation which has developed from their efforts of a hundred years ago. Our need to-day is for a headquarters where vigorous work for the benefit of every one of our members can be carried out. We must look at that project with no less courage and vision than was theirs. We are not building only for to-day but for

our successors in the hundred years to follow. We hope that you will all consider your obligations to the Centenary Fund in this spirit of wide vision. If such a spirit can permeate our membership throughout the country, then the success which is already assured for the appeal we now launch will be complete. You will ensure for yourselves a distinguished headquarters, belonging to each of you and worthily proclaiming the ideals and aspirations of pharmacy.

### Trade Veterans

**THOS. CHRISTY & Co., LTD.**—The directors entertained office staff and friends at the Café Royal, London, W.1, on January 6 to mark the completion by two members of forty-five years' service. Mr. J. V. Calder, who joined the late Mr. Thomas Christy in 1893, and was appointed a director on the formation of the limited company in 1934; and Mr. F. M. Upwood, who joined the firm in 1894 and has held the post of works manager for many years. Mr. Cecil B. Christy (managing director) reminded his hearers that he represented the third generation of Christys under which both gentlemen had served. He then presented a wireless set to Mr. Calder and a chiming clock to Mr. Upwood as an appreciation from the firm. It is understood that, for health reasons, Mr. Calder, while remaining a director, has now to curtail his activities, Mr. Upwood looks forward to more years of active service.

**HOWARDS & SONS, LTD.**—At the end of 1938 three old and respected employees, Messrs. William Beasley, Charles Teale and William Hodsoll, retired. Mr. Beasley joined the firm at the Stratford works in 1886, and has thus completed fifty-three years of service. He has been foreman in charge of the mercurials, iodides and camphor departments for many years. Mr. Charles Teale joined the firm in 1887 and has thus completed fifty-two years of service. He was in the bark-sampling laboratory until 1915, when he was promoted foreman in charge of the quinine-refining department. Mr. Hodsoll also joined the firm in 1887, first helping in the production of iron and quinine citrate scales, later in the quinine-refining department and finally in the iodides department.

### Croydon

**LANTERN LECTURE.**—"The Port of London" was the subject of a talk given by Mr. A. G. Thompson to the Croydon Pharmacists' Association at the Café Royal, Croydon, on January 5. Mr. Thompson prefaced his talk with a description of the site of London and its early history. Mr. Thompson reminded his audiences of the large variety of drugs imported into London and of the curious manner in which some of them were packed, such as aloes in monkey skins, and balsam from South America in cow-hide. The talk was illustrated by lantern slides.

## CONTENTS

See p. 37



## London

**CONTROL OVER HAIR LOTIONS URGED.**—A recommendation that the sale of hair preparations containing carbon tetrachloride should be prohibited, unless accompanied by a warning of their dangerous character, has been made by the Kensington Borough Council Public Health Committee. It is understood that representations to this effect are to be made to the Home Office and Ministry of Health.

**SUPPER-DANCE.**—The annual supper-dance of the North Metropolitan Branch of the Pharmaceutical Society was held at the small Queen's Hall, W.1, on January 5, when about 150 members and friends were present, among whom were Mr. H. Skinner (president), and Mrs. Skinner; Mr. and Mrs. J. C. Young; Mr. and Mrs. W. S. Howells; and Mr. and Mrs. G. A. Tocher. The M.C. was Mr. G. Weiss. Prizes for various spot dances were provided by wholesalers and manufacturers. A small donation to the Society's Benevolent Fund was made from the proceeds.

**MACHIAVELLIAN PHARMACISTS.**—A meeting of the Wimbledon Branch of the National Pharmaceutical Union was held on January 3, Mr. A. I. C. Weston in the chair. Miss Sharples (assistant secretary of the Union) addressed members on "Getting the Right Perspective." She said that Machiavelli had divided mankind into three classes—those who understood and acted instantly; those who understood and acted after explanation; and those who neither understood nor acted. Pharmacists could be similarly classified. The three classes were apparent in support of any scheme for the betterment of pharmacy, and the speaker declared that a better spirit of co-operation between pharmacists, particularly those of the third category, was necessary before such a scheme could be successful. Membership of the N.P.U. cost less than a penny a day, and the benefits were many—particularly in the matter of insurance against third-party risks. Many of the claims received under this insurance cast a reflection on pharmacists and could be avoided. Miss Sharples gave several examples of claims which could have been avoided by more care on the part of the chemist. She also explained the usefulness of the N.P.U. inquiry service and urged members to make full use of it; appealing for more support for the C.F. scheme, Miss Sharples outlined the various new measures adopted to ensure its effectiveness.

## Merseyside

**SIMULTANEOUS WINDOW DISPLAYS.**—The committee of the Birkenhead and Wirral Branch of the National Pharmaceutical Union has organised a series of simultaneous Chemists' Friends window displays.

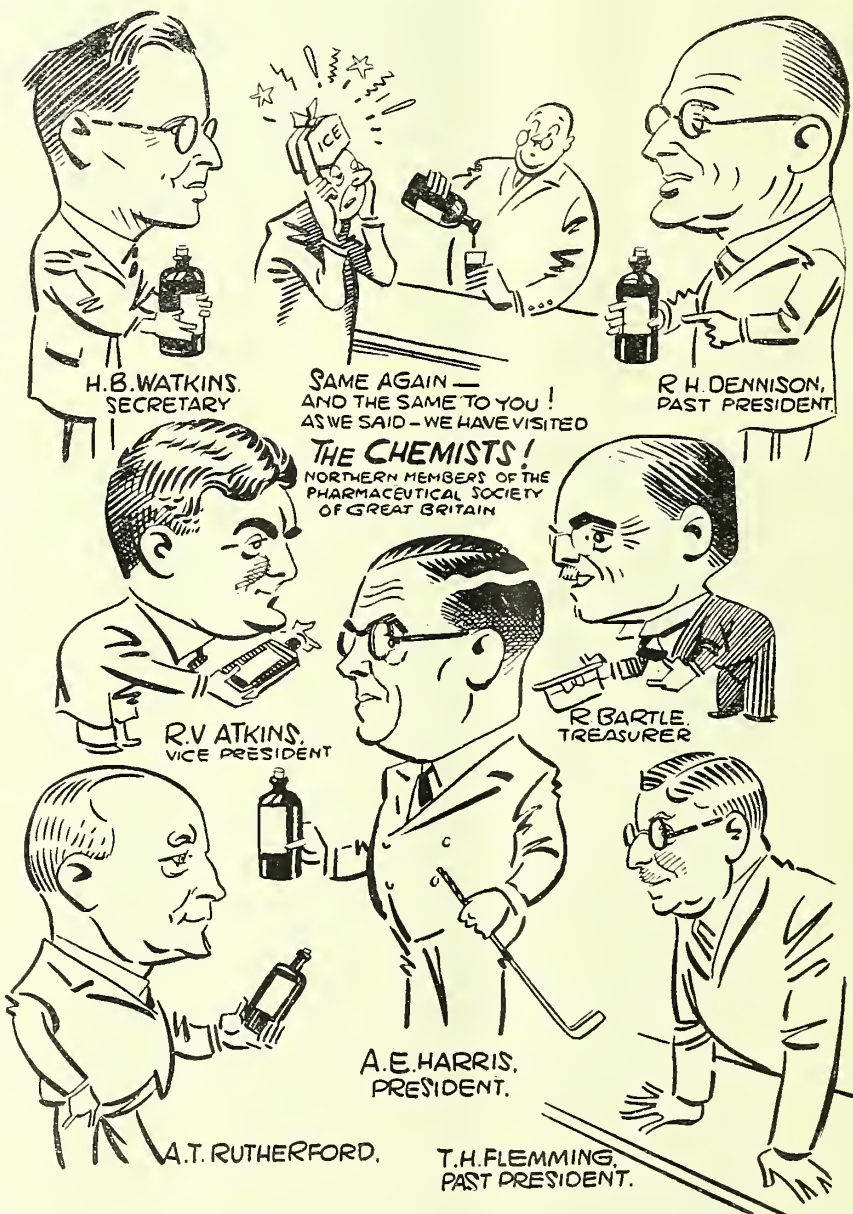
**TRANSPORT LECTURE.**—Mr. J. W. Wright (director, Evans Sons Lescher & Webb, Ltd.) gave an address on "Fundamental Transport Problems" to the Liverpool Branch of the Industrial Transport Association (of which he is chairman) on January 5.

## Miscellaneous

**CHILDREN'S PARTY.**—At the recent annual children's party of the West Glamorgan Branch of the Pharmaceutical Society the programme was arranged by Mrs. Glyn John and Miss Gustavus, who also organised the games. Mr. Fred James (chairman of the branch) was present. Proceeds were in aid of the Society's Benevolent Fund.

**IN THE COURTS.**—At Highgate Police Court, London, recently, Mr. E. Dickinson, M.P.S., Archway Road, was summoned for selling white-precipitate ointment deficient in ammoniated mercury. The case was dismissed. At West Ham Police Court, London, on January 11, Baker's Pure Drug Co., Ltd., 913 Garratt Lane, Tooting, were summoned for selling, at 41 Leyton Road, Stratford, camphorated oil which was deficient in camphor to the extent of 23 per cent. The secretary of the company suggested that there was a breach of warranty, but the magistrate said this had not been established, and on the facts before him the firm would be ordered to pay a fine of £5.

**CHIROPODY CONVENTION.**—The seventh annual convention of the British Association of Chiropodists will take place at the Empress Rooms, Royal Palace Hotel, Kensington, London, W.8, on January 27 and 28. The programme includes, in addition to visits to orthopaedic and general hospitals and to factories, lecture-demonstrations and an address by Mr. E. L. G. McManus (registrar, Board of Registration of Medical Auxiliaries) on "Medical Recognition and Registration: Its



[Reproduced by courtesy of the "North Mail"]

PERSONALITIES IN THE NEWCASTLE DISTRICT AND NORTHUMBERLAND BRANCH OF THE PHARMACEUTICAL SOCIETY CARICATURED RECENTLY IN THE LOCAL PRESS



Meaning and Operation." Tickets of admission are obtainable from the secretary of the Association.

**NEW YEAR PARTY.**—Members of the Hull Pharmaceutical Students' Association celebrated the New Year with a party in Powolny's Tudor Room on January 5. There was a large attendance, and the guests included the president of the Chemists' Association (Mr. H. Bays), Mr. and Mrs. E. A. Brocklehurst, Mr. W. G. Bennett, Mr. W. Naylor, and Mr. K. P. Clappison. A cine camera show was provided by Doughtys, Ltd. The arrangements were made by the secretary (Mr. D. E. Davies), who was assisted by a committee comprising Miss Clegg (president), Miss Salford (vice-president), the Misses Callicott, Levy and Witty, and Messrs. Jennison and Williams.

**PHARMACY ACT CASES.**—At Keighley Police Court on January 10, John F. Smith, Ltd., Highfield Lane, were fined £2 10s. on two charges of infringement of the Pharmacy and Poisons Act in respect of the use of restricted titles.—At Margate Police Court, on January 4, Mr. B. Chatterton, M.P.S., and Mr. D. Stephen were prosecuted for offences against the Pharmacy and Poisons Act in connexion with the sale of strychnine in a nerve tonic. For the defence it was explained that Mr. Chatterton disposed of the business to Mr. Stephen. A fully-qualified chemist was engaged, but eventually left. Mr. Chatterton then visited the shop in the mornings to look after the dispensing and again in the evenings. The charges were dismissed under the Probation of Offenders Act.

## Irish Notes

### Irish Drug Association

Mr. P. A. Brady (president) was in the chair at a meeting of the committee of the Irish Drug Association on January 2. The committee considered a number of complaints received regarding retailers in the Dublin area who disregarded the agreement as to working hours during the Christmas period. It was agreed that in future no leniency should be shown to offenders, and that steps would be taken to ensure that similar agreements were properly observed. A resolution that the name of a Dublin wholesaler on the approved list be removed was proposed and seconded; it was stated that the firm in question was not conforming to the Association's requirements. After discussion it was agreed to postpone action. The committee were informed that a recent series of test purchases made for the Proprietary Articles Trade Association had showed that retail prices were being strictly observed, a condition of affairs regarded as satisfactory. Consequent on representations by the Association, several manufacturers had agreed to prices suggested by the committee (the alterations have resulted from reduction of the package tax, and in several instances agents in Eire had altered prices without the consent of the manufacturers). The Dublin Chamber of Commerce requested the Association's support for a memorandum to be presented to the Senate in connexion with the Holidays (Employees) Bill, 1938. The committee agreed to the inclusion of the Association's name on the proposed amendments. The president and Messrs. A. J. Donnell, P. F. McGrath, B. Smith and R. J. Kidney were appointed to interview the Prices Commission on the subject of the package tax. Members were asked by the committee to convey as much information as possible regarding the manner in which prescriptions were dispensed. For example, when sugar-coated tablets are dispensed the contraction "s.c." should be added to the stamp. Members were also reminded clearly to code proprietary lines dispensed, especially if the standard retail price is charged, and the prescription was not stamped or entered in the prescription book.

### Ulster Chemists' Association

The monthly meeting of the executive committee of the Ulster Chemists' Association was held in Belfast on January 3. The president (Mr. E. A. Richey) occupied the chair, and there were also present Messrs. C. Abernethy, R. B. Abernethy, J. Dundee, H. J. Cousley, R. Gibson, T. A. Gibson, R. A. McEwen, Jas. McDowell, John McDowell, J. McGregor, W. J. Rankin. The president welcomed Mr. Cousley to the executive committee. The secretary reported that the advertising subcommittee had met in Mr. Rankin's office on December 16, and had drafted the design and wording for the display cards which would be put in hand at once and sent out to each

member as quickly as possible. It was also reported that the enrolment forms and covering letter concerning air-raid precautions had been drafted and approved, and would be sent out from the A.R.P. office to each chemist in the Belfast area almost immediately. The Belfast Water Commissioners wrote furnishing details of charges for water supply to chemists. As these charges varied considerably owing to differences in valuation rating, method of supply (meter or otherwise), amount of water required, etc., it was shown to be a question for each individual to investigate if he thought it necessary. On the motion of Mr. C. Abernethy, seconded by the president, Mr. Jas. Macauley was unanimously elected as a representative to the Belfast Chamber of Trade in place of Mr. Tate, who was unable to act. Two press advertisements submitted by the advertising adviser were approved for insertion, and two others were referred back for amendment. A design for display cards submitted by W. W. Cleland, Ltd., was approved, and the secretary was instructed to obtain information regarding a slightly larger design and submit this to the advertising subcommittee for approval before placing the order. A resolution of sympathy was passed to Mr. I. W. Parker, Enniskillen, on the death of his wife. The secretary was given permission to obtain the requisite number of copies of the official Chemists' Friends list setting out the names of the manufacturers and the different preparations listed for despatch to each member of the U.C.A. The president raised the question of a social meeting in the near future, with the object of bringing members together. During the discussion which ensued it transpired that the Council of the Pharmaceutical Society of Northern Ireland had a similar function in mind, and a small committee, comprising the president, Messrs. Cousley, Rankin and Shinner, was appointed to consult with the P.S.N.I. as to the possibility of co-operation in the matter. Mr. McGregor exhibited two circular letters which had been sent out to the trade by two manufacturing firms notifying a reduction in the selling prices in dentifrices coinciding with an increase in prices to the trade. He pointed out that this action resulted in a substantial "cut" in the chemist's profit, and suggested that a strongly-worded letter of protest should be sent to the interested parties, and that members should be urged to promote even more energetically the sale of similar preparations which appear on the Chemists' Friends list. Mr. McGregor's proposal met with unanimous approval and support, and the secretary was instructed to take action on the lines indicated. This concluded the business of the meeting.

## Scottish Notes

### An Aberdeen Centenary

The Aberdeen Pharmaceutical Association claims to be the oldest pharmaceutical association in Great Britain, going back well over 100 years, and having authentic records dating from March 4, 1839. As far as these minutes go, therefore, the Association completes its centenary this year. To celebrate this event members have arranged a dinner to be held in the Palace Hotel, Aberdeen, on March 15. A dance is also proposed for March 22, in connexion with which apprentices and assistants who have served, or are serving, an indentured or regular apprenticeship with a member (past or present) of the Association, will be entitled to free tickets for themselves, and partners, provided they are resident in Aberdeen.

### Miscellaneous

**ASSISTANT'S HALF-HOLIDAY.**—At Aberdeen Sheriff Court, on January 6, Mr. John Gall Mutch, M.P.S., was fined £1 for employing an assistant on his half-holiday (*C. & D.*, December 17, p. 661).

**DANGEROUS DRUGS ACT.**—In Paisley Sheriff Court, on January 10, Mr. A. McMillan Whiteford, M.P.S., 43 Greenock Road, Paisley, was charged with failing to register particulars of the purchase of heroin and with supplying the drug to his wife, who was not authorised to be in possession of the drug. The Procurator-Fiscal, Mr. John Hill, said that in a period of about six months accused had obtained forty-five tubes of the drug and had only registered thirty tubes. He had supplied his invalid wife with sixteen tubes, each with twenty tablets. He had had prescriptions, but was not entitled to give further supplies without a new prescription. There was no sinister motive behind the offence, but it was a case of gross carelessness. A fine of £5 was imposed.



# Imperial and Foreign News

## France

**DAGUERRE CENTENARY.**—President Lebrun attended a celebration at the Sorbonne University, Paris, on January 7, of the hundredth anniversary of the reading, before the Paris Académie des Sciences, of a preliminary notice of the process invented by L. J. M. Daguerre. Details of the Daguerrotype process, as it was called in his honour, were made public in August of that year. Daguerre's discovery was of a means whereby changes effected by light in a sensitive surface, though too small to be visible, could be converted or "developed" into a visible image by after-treatment. See also pp. 25 and 39.

## Gibraltar

**LIBEL ACTION.**—In a libel action brought by Mr. M. C. Rock, 163 Main Street, Gibraltar, against Mr. Hugh Lloyd, a settlement was reached out of court, the defendant withdrawing allegations which had been made by him in a letter to an English perfume-manufacturing company. Mr. Rock, who is a partner in the business of Rock & Son (agents and importers), Gibraltar, qualified as a chemist and druggist in London in 1910.

## Jamaica

**POISONS LAW CHANGES.**—The Minister of Health replied on January 6, 1939, to a letter sent to him by the Owners of the Proprietary Articles Section of the London Chamber of Commerce. The letter related to a Drugs and Poisons Amend-

ment Law, promoted in Jamaica to amend the Sale of Drugs and Poisons Law, 1926 (which provides that only qualified chemists and druggists shall be authorised to conduct the sale of proprietary medicines). Dated March 18, 1938, the letter expressed uneasiness that the Bill would deprive people living in country districts of their only means of obtaining quickly remedies for simple ailments, and suggested that proprietary remedies that contained no scheduled poisons should be included in Schedule B of the amending Bill. The Minister's reply states that a copy of the letter was passed to the Governor of the Colony for his observations. As a result, by a Government Notification dated June 23, 1938, the following medicinal substances were added to Schedule B of the Law of 1926 (as amended by the Law of 1937)—Essence of peppermint; oil of peppermint; a healing oil containing any or all of the following: eucalyptus oil, oil of lavender and turpentine; a white liniment containing any or all of the following: cotton-seed oil, camphor, turpentine and vinegar; a cough mixture containing any or all of the following: extract of liquorice, tincture of lavender, essence of aniseed and eucalyptus oil; an aperient pill containing any or all of the following: extract of aloes, extract of rhubarb, oil of peppermint, ginger; flavouring essences and colouring liquids manufactured for domestic purposes. The Government of Jamaica consider that, with these additions, the items in Schedule B should now suffice to meet the needs of the inhabitants of rural districts in the Colony, and they do not propose, at present, to make any further amendment to the Law.

# Topical Reflections

By Xrayser

## Co-operative Societies on the War Path

Your first editorial article on p. 13 of last week's issue, read in conjunction with a report in the first column of p. 5, warns us to take, through our representatives, whatever steps are necessary to secure the maintenance of an impartial freedom. Whether in any circumstances a pharmacist in business can place himself outside the scope of Section 8 of the Pharmacy and Poisons Act, 1933, or a limited company can place itself outside those of Section 9 of the Act, may be arguable; but it seems too clear for discussion that he or it cannot be alternately an authorised seller of poisons and a retail drug vendor of some other kind, flying the recognised flag one day and the Jolly Roger the next. Nothing has been published, as far as I am aware, indicating the contentions of the co-operative societies in support of their action. It is sufficiently ominous, however, that "a draft amendment to the Act had been laid on the table by the Home Office." In my experience, co-operative societies are exacting buyers and selective salesmen: the more reason, therefore, that we should insist, so far as we are in a position to do so, on their observing their statutory obligations. I do not at the moment regard the contingency of fresh legislation as of immediate urgency; but it may at any time become urgent, and in these circumstances the sooner this draft amendment is released for discussion the better.

## Medical Recusants

The nuisance of having to deal with medical practitioners who fail to comply with the Regulations for prescribing certain scheduled poisons has come to light again, this time in a report from Chester (p. 1). I need not refer a second time to the weighty opinion of the late Sir William Glyn-Jones on this aspect of pharmaceutical practice, it being only a few months since I had occasion to cite it: my aim in this paragraph is to carry the matter a stage further. It seems to me that this is a problem with which the individual pharmacist should not be left to wrestle single-handed. I suggest that the time has come when the Pharmaceutical Society, the National Pharmaceutical Union or both bodies should by their respective secretaries prepare, and at need issue, a letter (or two distinct letters) which, on the receipt at headquarters of a complaint of the kind mentioned at the Chester meeting, would be sent to

every registered medical practitioner in the postal area concerned. It is not for me to dogmatise as to the terms of such a communication. But, while avoiding so harsh a phrase as "forced into illegality," I would have it pointed out that every pharmacist transgressing against any Poisons Rule is placed in peril of action by legal proceedings in court, by appearance before the Statutory Committee, or both. It could be laid down, if thought desirable, that such a pharmacist would be denied the support of the N.P.U. in his defence. And in any case a general instruction to decline all prescription-orders that showed even the smallest irregularity in respect of scheduled poisons could be issued to pharmacists in business.

## Quaint Synonyms

The seventy-first *C. & D. Diary* has, in addition to its value as a compendium of frequently needed facts, a particular attraction for me on account of the reprinted and revised "Dictionary of Synonyms." Comment on some of these could easily exceed my available space. How many of your readers, for instance, sell "External All Fours"? Even the "internal" kind is, I believe, a relatively modern institution. Usages in these popular titles vary in different parts of the country. Your oil of peter (or petre) is not the one on which I was "brought up": I was taught to regard the name as a synonym for black oil (with or without a final "s"), a product made by slowly adding commercial sulphuric acid to rape oil, with, in some recipes, the incorporation of a little oil of turpentine. I have failed to discover nine oils and oil of brick in your alphabet; but on the other hand I am the richer by learning that "nil" is the equivalent of zinc oxide, and "nothing" of mel boracis. One of my customers used to bring a smelling bottle to be recharged with "pure dynamite," his way of ordering unscented smelling salts. By a natural train of thought I was directed from the Dictionary to Beasley's "Druggist's General Receipt Book," of which I possess a fifth-edition (1861) copy. That book, as I trust your readers know, is an almost inexhaustible repository of quaint and often obsolete titles: one would be interested to learn how it happens that early editions of it seem virtually to have disappeared from the face of the earth, even in libraries where they might be expected to be present.



# Company News

P.C. means Private Company and R.O. Registered Office

**P. E. JESSOP, LTD. (P.C.).**—Capital £5,000. Objects: To carry on the business of chemists, druggists, etc. Solicitors, C. R. Enever & Co., Broad Street House, E.C.2.

**BORAX & CHEMICALS, LTD. (P.C.).**—Capital £10,000. Objects: To carry on business as agents for the sale of chemical products of all kinds, etc. Solicitors: Wordsworth & Co., 39 Lombard Street, E.C.3.

**S. S. WILD, LTD. (P.C.).**—Capital £3,500. Objects: To carry on the business of chemical fertiliser manufacturers and merchants, chemists, druggists, etc. Sydney S. Wild, 6 Penrith Road, Boscombe, Bournemouth, director. R.O.: 709 Christchurch Road, Boscombe, Bournemouth.

**TOMLOY CHEMICAL & ENGINEERING CO., LTD. (P.C.).**—Capital £2,000. Objects: To carry on the business of chemical and experimental engineers, manufacturers of and dealers in chemicals, bakelite and other moulding compositions, etc. R.O.: 5-6 Princes Street, Cavendish Square, W.1.

**WARSTO PRODUCTS, LTD. (P.C.).**—Capital £500. Objects: To carry on the business of shellac, gum, wax and chemical merchants, manufacturers of white lac, manufacturing chemists, etc. John L. Warne, 272 Baring Road, Grove Park, S.E.12, director. R.O.: 30 Bush Lane, Cannon Street, E.C.4.

**J. H. CUFF, LTD. (P.C.).**—Capital £100. Objects: To carry on the business of manufacturers of and dealers in cattle medicines, chemical plant and materials, chemists, druggists, etc. William H. Bell, The White House, The Green, Southgate, N.14, director. R.O.: 453 Caledonian Road, N.7.

**M.K.G. DEVELOPMENTS, LTD. (P.C.).**—Capital £100. Objects: To carry on research in connexion with organic chemicals and other substances, and the making and perfecting of processes relating thereto. The first and permanent directors are Herman Mark, Peter M. Jacques Koch de Gooreynd and George McKerrow. Solicitors: Allen & Overy, 3 Finch Lane, London, E.C.3.

**LATOBY RAY (LONDON), LTD. (P.C.).**—Capital £100. Objects: To acquire patents connected with insecticides by means of radiology, chemistry, or otherwise, and to carry on the business of manufacturers of and dealers in apparatus for insecticide, radiology, electro-therapy, bacteriology, surgery, etc. The directors are H. Attari and W. R. Sharp. R.O.: 19 Berkeley Street, W.1.

**SOUTH AFRICAN DRUGGISTS, LTD.**—The directors' third annual report and balance sheet at July 31, 1938, show that on January 1, 1938, the company entered into an agreement of cession with Sive Brothers & Karnovsky, Ltd., Macdonald Adams & Co., Ltd., and P. Grant Smith (Transvaal), Ltd., whereby it acquired the trade assets and certain share investments of these companies, and, as from that date, commenced trading operations. The acquisition of these assets converted the company from a financial to a trading company. The financial years of the companies which ceded their assets ended July, June and June respectively, and as stock was last taken on those dates in 1937, the directors deemed it advisable to draw up accounts for the seven months ended July 31, 1938, and in future to end the financial year of the company at July 31. In view of the short trading period, it was decided not to pay an interim dividend, but rather to declare one covering the entire period. The net profit for the seven months is £50,379 16s. 2d., from which must be deducted reserve for taxation £6,348 15s., leaving £44,031 1s. 2d., to which is added the balance brought forward from the previous year £30,408 4s. 10d., making £74,439 6s., out of which the following dividends have been paid:—Preference shares: Half-yearly dividend at the rate of 5½ per cent. per annum, £11,000; ordinary shares: final dividend at the rate of 3¼ per cent. in respect of the year 1937, £15,000. The directors recommend the payment of a dividend of 7½ per cent. on the ordinary shares, which will absorb £30,000, leaving a balance of £18,439 6s.

## Voluntary Liquidation

**Walworth Pharmacy, Ltd.,** 283 Walworth Road, London, S.E. The statutory meeting of the creditors was held recently at Anderton's Hotel, Fleet Street, London, E.C., when the statement of affairs showed ranking liabilities of £4,656 9s. 9d., with a deficiency of the same amount, all the assets being claimed by the Receiver for the debenture holder. The Receiver for the debenture holder, it was stated, had intimated that the assets were being disposed of for a figure of approximately £1,700. The amount due under the debentures was £2,000, and consequently there would be no assets available for the ordinary creditors. The cash creditors were the directors. The company was registered in November 1922 and a number of branches had been opened, but they were not all profitable. After discussing the position it was decided that the voluntary liquidation of the company should be confirmed with Mr. Parkin S. Booth, of the Association of Manufacturing Chemists, Holborn Viaduct, London, E.C., as liquidator, with a committee.

## Trade-Mark Applications

The figures in parentheses refer to the classes in which the marks are grouped. A list of classes and particulars as to registration are given in "The Chemist and Druggist Diary and Year-Book," 1939, p. 342.

(From "The Trade Marks Journal," December 21, 1938)

### SCHEDULE IV

- "MONIC"; for perfumery, etc., excluding soap and essential oils (3). By Cenovis Yeast Products, Ltd., 12 Henrietta Street, London, W.C.2. 602,040.
- "ALBRA"; for toilet preparations (3). By Biometica, Ltd., 5 Ram-payne Street, Vauxhall Bridge Road, London, S.W.1. 602,435.
- "KEEP-FIT HEALTH SALTS" with design of "Keep-fit" girl (words "Keep-Fit" disclaimed); for medicinal salts (5). By Joseph Lingford & Son, Ltd., 5 Durham Street, Bishop Auckland, Durham. 600,104.
- "SHELL MALARIOL" (word "Malaria" disclaimed); for insecticides, etc. (5). By Shell Company of Rhodesia, Ltd., St. Helen's Court, Great St. Helen's, London, E.C.3. 601,739. (Associated.)
- "GARDOK"; for insecticides (5). By Price's Patent Candle Co., Ltd., Belmont Works, London, S.W.11. 600,815.
- "OVAMORT"; for insecticides (5). By The Murphy Chemical Co., Ltd., High Street, Wheathampstead, Herts. 601,537.
- "SANFONS" for menstruation appliances (5). By Fassett & Johnson, Ltd., 86 Clerkenwell Road, London, E.C.1. 602,039.
- "BATH BUOY"; for bath salts (5). By The Dubarry Perfumery Co., Ltd., Goldstone Laboratories, Hove Park Villas, Hove. 602,103.
- "SALIACTYL"; for pharmaceutical preparations (5). By Egema, 61 Rue de Vaugirard, Paris. 601,830.
- "PREPALIN"; for medicinal preparations of vitamin A (5). By Glaxo Laboratories, Ltd., Greenford Road, Greenford, Middlesex. 601,871.
- "GREEN PASTURES"; for dietetic foods, etc. (5). By Fairbank Kirby (Grimsby), Ltd., Ropery Street, Grimsby. 602,119.
- "ZONORONE"; for medicated preparations for bronchitis, etc. (5). By Pinkerton Gibson & Co., Ltd., 13 Queen Street, Edinburgh, 2. 601,906.
- "ORTHELUM"; for a medicinal preparation for the skin (5). By Irish Pharmaceuticals, Ltd., 1A Basin Lane, Dublin. 602,623.
- "OMNISAN"; for veterinary medicines (5). By Seropharm, Ltd., 41 Sunningfields Road, Hendon, N.W.4. 602,450.

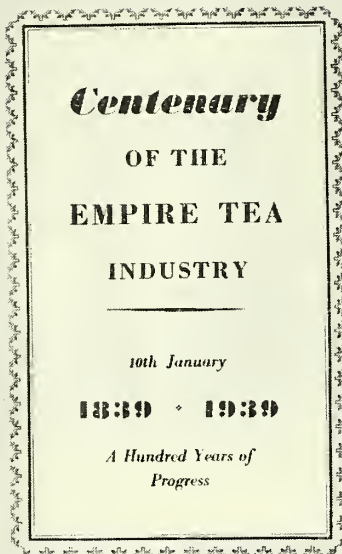
(From "The Trade Marks Journal," December 28, 1938)

### SCHEDULE III

- "McDOUGALL'S"; for insecticides, etc. (2). By Cooper, McDougall & Robertson, Ltd., Ravens Lane, Berkhamstead, Herts. 584,967. (Associated.)
- "VEELOES"; for medicated preparations (3). By Fryer & Co. (Nelson), Ltd., Victory Factories, Chapel Street, Nelson, Lancs. 582,502.



## ONE HUNDRED YEARS OF EMPIRE TEA



**EMPIRE TEA CELEBRATIONS**—*Left*: Cover of booklet relating to ceremonial auction of casket of Empire tea by Lord Mayor at Plantation House. *Right*: Loading tea on to elephants' backs at St. Katherine's Dock, London, for transport to ceremonial auction.



**EMPIRE TEA PRODUCTION**—1. General view of an Indian tea estate. 2. Native tea pluckers at work. 3. "Withering" the leaves. 4. Tea factory on an estate in Ceylon.

[Illustrations by courtesy, Empire Tea Market Expansion Bureau]



# Empire Tea Centenary

WHILE this article is chiefly concerned with recording the centenary of the first arrivals of Empire tea in this country, it is perhaps not out of place first to briefly review the history of tea from its earliest days. Tea was first introduced into England from China in 1657, when it fetched from £6 to £10 per pound. In the early years it was almost exclusively sold by apothecaries. Its medicinal and curative qualities were extolled in the advertisements of that time published by "cophee houses," who retailed tea in beverage form, as is shown by the following advertisement that appeared in the "Mercurius Politicus" of September, 1658:—

That excellent and by all Physicians approved China Drink, called by the Chinese Tcha, by other nations Tay, alias Tee, is sold at the Sultaness Head, a cophee house in Sweetings Rents, by the Royal Exchange, London.

By the courtesy of Messrs. R. Twining & Co., Ltd., 216 Strand, London, W.C.2, tea merchants at this address since 1706, we reproduce the following account they had in 1716 with "Mr. Allen, Apothecary, the Devizes."

Item	Price	Total
For 4 pound all Nutt	3:3 pce	13
For 1 pound green w/ sugar	18: -	12 9
For 1 pound S	14: -	14 9
For 1 pound Bohee tea	20: -	1 9
For 1/2 pound S	18: -	9 6
For 1 pound Smug	5 pott & box	5 9
<b>Total</b>		<b>4 20</b>

The Trade Reports of THE CHEMIST AND DRUGGIST published in 1860 and onwards give a long list of various teas. At this time the duty on tea was 1s. 5d. per lb. In the second column we reproduce (by courtesy of Messrs. Twining) an apothecary's advertisement published in 1710 offering, amongst other wares, "fresh and fine Bohee tea at 12s. a pound."

## Empire Tea

The Empire Tea Bureau, Plantation House, London, E.C.3, organised the celebrations in connexion with the centenary of the Empire tea trade. On Tuesday, January 10, chests of Indian and Ceylon tea were taken off a lighter at St. Katherine's Dock, London, E., and loaded on the backs of three elephants and transported to Tower Hill. At this point the chests were transferred to horse-drawn drays and taken to Plantation House, Mincing Lane, the headquarters of the Tea Brokers' Association of London. A ceremonial auction of about 38 lb. of rarest and choicest Empire tea followed. The Lord Mayor of London, Sir Frank H. Bowater, auctioned Lot I composed of a silver casket of Empire tea, similar to one presented to their Majesties, The King and Queen. The auction room was crowded to its utmost and after spirited bidding, the casket was "knocked down" for £1,156, which amount will go to the Tea Trade Benevolent Fund. The casket was suitably inscribed and is to remain sealed until January 10, 2039.

## First Importation

The first importation of tea from the British territories in Assam, consisting of eight chests, containing about 350 pounds, was put up by the East India Company to public sale in the Commercial Sale Rooms, Mincing Lane, on January 10, 1839, and excited much curiosity. The lots were eight, three of Assam souchong, and five of Assam pekoe. On offering the first lot (souchong) the sale-broker announced that each lot would be sold, without the least reservation. After much competition it was knocked down for 21s. per pound. The second lot of souchong was bought for 20s. per pound. The third and

last lot of souchong sold for 16s. per pound. The first lot of Assam pekoe sold after much competition for 24s. per pound, every broker appearing to bid for it. The second, third and fourth lots of Assam pekoe fetched the respective prices of 25s., 27s. 6d., and 28s. 6d. per pound. For the last lot (pekoe) a most exciting competition took place; there were nearly 60 bids for it. It was at last knocked down at the extraordinary price of 34s. per pound.

## Pioneer Days

The development of the Empire tea industry in its early days met with the usual trials and misfortunes of the pioneer. Many perished from fevers and the perils of the unmapped jungle that was Assam in those days. Difficulties were met with in obtaining supplies of seeds from China, and, it is recorded, in one instance, after a quantity had been smuggled out of China into India the seeds were found to have been boiled, and were therefore useless. Financial troubles almost brought an end to the industry, but these were later overcome, but it was not until about 1849 that conditions began to improve and the number of planters increased very considerably. During the years 1863-66 the industry suffered from over-speculation and, it is reported, there were literally thousands of bankruptcies of unhappy investors in Indian and Ceylon tea shares. In 1880 Empire teas had made such headway that imports passed those of China and other foreign teas. Imports continued to increase from then right up to the present day.

## Duties and Imports

Tea had been taxed since its introduction into this country three centuries ago until 1929, when the duty (then 4d. per lb. on foreign tea and 3½d. per lb. on Empire tea) was abolished. The duty was revived as from April 20, 1932, at the rates of 4d. per lb. on foreign tea and 2d. per lb. on Empire tea, with a non-recurrent Excise duty of 2d. per lb., irrespective of the origin

## Just Imported.

**Drinking Spaw Water, to be had at Mr. Robert Eury's Druggist, entering London-Bridge, at 18s. the dozen Bottles; fresh and fine Bohee Tea at 12s. a Pound; best Chocolate without Sugar at 3s. a Pound, with Sugar at 2s. half a Pound gratis to 6. good Encouragement to the Buyers of Coffee; Clean Jesuits Bark at 4, 6, 8, 10 s. per Pound, to be had at the same Place.**

of the tea, on stocks imported before April 20, 1932. In 1936 the Customs duties were increased by 2d. per lb. to 6d. per lb. on foreign tea and 4d. per lb. on Empire tea. Net receipts from Customs and Excise duty during past years were as follows: 1933-34, £3,934,505; 1934-35, £3,933,843; 1935-36, £4,082,070; 1936-37, £7,818,256; and 1937-38, £7,340,944. Between 1840 and 1939 tea paid duties amounted to over £600,000,000.

The following table, published in Customs and Excise annual report, gives the last figures of quantities of tea entered for consumption in this country, during the past five years, ended March 31.

	1933-34	1934-35	1935-36	1936-37	1937-38
	lb.	lb.	lb.	lb.	lb.
British India ...	237,624,490	250,894,226	263,535,506	265,519,956	248,042,045
Ceylon ...	113,214,408	134,265,566	131,537,426	137,585,654	122,924,738
Other British countries (including Hong Kong)	3,830,339	5,433,324	10,178,553	12,506,820	10,036,038
China ...	5,399,889	12,034,697	8,144,430	13,025,955	13,290,364
Dutch East Indies (Java, etc.) ...	40,499,340	27,620,443	33,309,549	28,083,436	15,881,360
Other Foreign countries	996,178	2,865,618	4,020,692	6,434,797	9,501,442
Origin unknown ...	31,782,344	3,220,638	287,498	71,762	53,847
<b>Total ...</b>	<b>433,346,988</b>	<b>436,334,512</b>	<b>451,013,654</b>	<b>463,228,380</b>	<b>428,729,834</b>



# Pharmaceutical Society of Great Britain

## London Evening Meeting

AN evening meeting of the Pharmaceutical Society was held at 17 Bloomsbury Square, London, W.C.1, on January 10, Mr. W. Deacon, Vice-president of the Society, in the chair, when Mr. J. H. Gaddum, Sc.D., M.R.C.S., L.R.C.P., professor of pharmacology at the Society's College, gave a lecture on

### Recent Discoveries About Hormones

illustrated by lantern slides, and of which the following is an abstract.—The great advances that have taken place in recent years in our knowledge of hormones, Professor Gaddum said, have been primarily due to the development of methods of biological standardisation. The hormone of the suprarenal medulla, adrenaline, was the first hormone to be isolated in the pure state; in fact it was isolated before the word hormones was invented. Adrenaline is a fairly simple derivative of tyrosine. A knowledge of the structure of adrenaline has proved a useful guide to research chemists, and there is every reason to hope that the discovery of the chemical structure of other hormones will have the same effect. The active principle of the thyroid thyroxine is the other hormone, which can be regarded as a derivative of tyrosine. While the treatment of thyroid deficiency is simple the only really effective treatment of Graves disease and other conditions in which the thyroid liberates too much secretion is surgical removal of most of the overactive gland. Some recent work by Clutton, Harington and Yuill may perhaps show the way to another form of treatment. These workers have attached thyroxine, by chemical linkage, to various proteins and then used the substance so formed as an antigen. A series of injections of this substance in rabbits caused the appearance in the blood of antibodies, which were found not only to combine with the antigen, but also to neutralise the effects of both thyroglobulin and also thyroxine itself when these were injected into rats. Serums prepared in this way may turn out to be an effective antidote to hyperthyroidism of all kinds, but the work has also a wider significance.

### ANDROGENS AND ŒSTROGENS

The steroid hormones form a group of fatty substances which include the male and female sex hormones, the pregnancy hormone and the hormone of the suprarenal cortex. The male hormone and other substances with the same effects are called androgens. A castrated male animal develops into a being that is something between male and female. These effects can be reversed by androgens, and these substances are commonly assayed by one or other of two effects: (1) The effect on the comb of a capon, which is normally very small, but which can be greatly increased by androgens. The area is measured and taken as an index of the effect; (2) The effect on the internal accessory sex organs of young rats. The most obvious clinical use of androgens is the replacement of the secretion of the testis when this fails, as it does in old age. One application which is being tested is in the treatment of enlarged prostate. The female hormones cause an abnormal hypertrophy of the prostate, different from that due to androgens, and this abnormal effect is inhibited by androgens. Clinical trials are in progress, but these trials are difficult because it is difficult to assess the result.

The female hormones were the first steroid hormones to be isolated. They cause the development of female characteristics and prepare the animal for motherhood, but they do not favour pregnancy, which is controlled by progestin. When Œstrogens are injected, the vagina, the uterus, and the mammary glands increase in size. Cocks grow female plumage and lose their combs. The usual methods of assay are as follows:—(1) The smear test which is made by examining the vaginal discharge of rats or mice. (2) The increase in the weight of the uterus of young rats. Œstradiol is probably the Œstrogen secreted by the ovary, from which it has been isolated. A large number of other Œstrogens have been isolated from natural sources. They are present in the urine of both male and female animals and the placenta, and in various plants. So far as their hormones content goes, male and non-pregnant female urines are practically indistinguishable.

A number of synthetic substances also have Œstrogenic effects, and some of these have molecules which are much simpler than that of Œstradiol. For example, many substances containing two benzene rings joined by two carbon atoms are Œstrogens. The activity is greatest when the carbon atoms are unsaturated. The most active known substance in this group is diethylstilbœstrol, which is about as active as any other known Œstrogen and which can be cheaply produced in large quantities. The clinical uses of Œstrogens are being discovered gradually. Their most obvious use is in the treatment of the symptoms of the menopause, when the natural secretion of the ovary is beginning to fail. When the ovary has discharged its ovum it starts secreting progestin, which is the hormone of pregnancy. If pregnancy does not occur, this secretion ceases after a few days. The word progestin is a loose appellation for substances having a particular kind of effect. Progesterone is the name of the pure hormone isolated from ovaries. The effect which is used to detect progestin activity is the development of the secretory phase of the uterine mucous membrane.

### HORMONES WITH UNKNOWN STRUCTURE

In addition to the hormones which have been discussed, there are others whose structure is still unknown. The activity appears to be associated, in practically all these cases, with the protein fractions of the extracts, and it is doubtful whether it will ever be possible to synthesise these hormones. A large number of hormones still belong to this rather baffling group. Secretin is a substance liberated from the mucous membrane of the small intestine and carried by the blood stream to the pancreas, which responds to its message with a secretion of pancreatic juice containing enzymes for the digestion of food. Gastrin causes secretion of gastric juice, and enterogastrone inhibits it, cholecystokinïn stimulates the gall bladder, and villikinïn stimulates the intestinal villi. The best known, and most studied, of the hormones in this group is insulin, the active principles of the pancreas, which is used in the treatment of diabetes mellitus. Various synthetic substitutes for insulin have been made and sold, and some of these substances share with insulin the power to lower blood sugar, but many toxic substances have this effect and none of the substitutes has been shown to act like insulin. A real substitute for insulin should not only lower the blood sugar, but also increase both the sugar metabolism and the sugar reserves.

### PITUITARY

The most important gland in this group is the pituitary. Extracts of the posterior lobe contain at least two, and probably three, active substances. One of these causes contraction of the uterus in mammals and a fall of blood pressure in birds. Another causes constriction of capillaries and contraction of the intestine. The intermediate part contains an active substance which makes frogs black.

Extracts of the anterior pituitary contain a large number of active principles which produce marked changes of various kinds. These changes can be divided into two classes:—(1) General effects on the metabolism of the whole body.—If an animal is deprived of its pituitary when young, the animal does not grow, but remains a dwarf. The condition can be prevented by the injection of suitable extracts of the anterior pituitary, and if large doses of these extracts are given a normal animal can be made to grow into a giant. The actions of the anterior pituitary on sugar metabolism have been widely studied. In some respects they are opposed to those of insulin, the active principle has been called the diabetogenic substance, or the glycotropic substance. The injection of this substance causes diabetes mellitus. If large and increasing doses are given this diabetes may be permanent. Removal of the pituitary also has effects on protein metabolism and fat metabolism, but these effects have been less studied. (2) Specific local effects, mostly on other glands.—Removal of the pituitary causes atrophy in the suprarenals, the thyroid, the parathyroids and the sex glands. The injection of suitable extracts stimulates these glands to over-activity.



## GONADOTROPIC SUBSTANCES

Extracts of the anterior pituitary contain two gonadotropic substances, which stimulate the sex glands. Of these, the follicle-stimulating hormone (F.S.H., prolan A) stimulates the ovaries so that they produce follicles and liberate oestrogenic substances, thus producing secondary effects on other organs due to these oestrogens. This substance causes spermatogenesis if given to male animals. The other gonadotropic substance, which is known as the luteanising hormone (L.H., prolan B) causes the development of corpora lutea in the ovaries with the production of secondary effects due to the liberation of progesterin. In the male it stimulates the cells which liberate androgens and causes secondary effects in this way on the secondary male organs such as the prostate and seminal vesicles. By injecting a proper combination of F.S.H. and L.H. it has been possible to cause the liberation of excessive numbers of ova. Another active substance in the pituitary is the lactogenic hormone (prolactin). The growth of the mammary gland is controlled by oestrogens, but extracts of the anterior pituitary produce active and prolonged secretion of milk. This effect is mainly due to a specific substance, called prolactin, which has possible uses both in hospitals and in dairies. There is reason to believe that anterior pituitary extracts contain a number of other substances and at least half a dozen more have been postulated, but the evidence is not yet complete.

When thyrotropic extracts are injected over long periods they eventually lose their effectiveness. The animal becomes immune to them, and this immunity has been shown to be due to the presence in the blood of an antihormone which antagonises the effect of thyrotropic hormone when injected into another animal. This development of antihormones differs in various respects from the development of antibodies when foreign proteins such as bacterial toxins are injected, and is probably due to different causes. Antihormones develop not only against the thyrotropic hormone, but against several other pituitary hormones as well.

## DELAYED ABSORPTION

In the normal body most of the glands must liberate their hormones more or less continuously throughout the day and night. If an extract is injected, the active substance may be absorbed and excreted again in a comparatively short space of time, so that unless frequent injections are given the animal is only exposed to the action of the hormone during a small fraction of the time. If the hormone is injected in an insoluble form, a depot can be made in subcutaneous tissues from which the hormone is slowly and continuously absorbed. This method of administration not only simulates normal conditions more closely than is possible with water soluble injections, but also often greatly increases the effectiveness of the injections, so that smaller doses are required. Various methods of delaying the absorption of hormones have been used:—(1) *Insulin*, in neutral solution, combines with protamine to form a precipitate. If a suspension of this precipitate is injected it is slowly absorbed and produces a prolonged effect. The addition of zinc to insulin also delays its absorption, and if zinc and protamine are both used the absorption is very much delayed. (2) *Steroid hormones* are commonly given dissolved in fixed oils, with the formation of a depot from which the hormone is slowly absorbed. A still more effective method of producing prolonged effects is the implantation of crystals or tablets. In this way it is possible to produce effects over periods of several months.

## CONCLUSION

All this work on hormones is putting powerful weapons in the hands of the practical world. The synthesis of new substances, allied in chemical structure to the natural hormones, is likely to lead not only to cheaper ways of producing the effects of the hormone itself, but also to the discovery of new pharmacological effects, like that of benzedrine and ephedrine on sleep, and of better methods of administration, like the taking of these substances by the mouth. The development of antihormones limits the use of many of the active substances in anterior pituitary extracts, and may perhaps constitute a danger by making the animal insensitive to the very hormone whose effect is desired. On the other hand, when more is known about them, antihormones, either administered by injection or developed by the patient himself, may be powerful therapeutic weapons.

Proposing a vote of thanks to Professor Gaddum, Sir Walter Langdon-Brown, a member of the Society's Council, said that the subject of the lecture was of great importance to human health and happiness, and enormous benefits had accrued to sufferers of such conditions as diabetes, myxoedema and idiocy since the introduction of gland therapy. He hoped to see a replacement of natural substances by synthetic compounds in the interests of economy following the rapid expansion in the study of hormones. Mr. H. Berry, dean of the Society's College, seconding the vote of thanks, welcomed Sir Walter, and congratulated the lecturer for the ground he had covered and the succinct manner in which he had condensed such a extensive subject.

## London Examination Results

The following were the results of the examinations held in London during January:—

Examination	Entered	Absent	Failed	Referred (One Subject)	Passed
Preliminary Scientific :					
(a) Whole examination ...	100	4	42	26	28
(b) Referred subject ...	85	—	—	33	52
Chemist and Druggist Qualifying :					
(a) Whole examination ...	100	1	52	27	20
(b) Referred subject ...	76	—	—	13	63

Under the regulations 9 and 16 the Board also prescribed that before re-entry for the examination 18 candidates should undergo a further course of study as follows:—Preliminary Scientific examination, in all subjects, 11; biology, 1; botany, 1; physics, 2; chemistry, 1. Chemist and Druggist Qualifying examination, in all subjects, 2.

## CHEMIST AND DRUGGIST QUALIFYING EXAMINATION

The following candidates have satisfied the examiners:—

Abbott, J. E., Cardiff	Hobbs, A. H., Bruton
Abbott, W. F. B., Falmouth	Horsefield, W., Manchester
Ainsley, Mary G., Chislehurst	Horsham, S. A., Ilford
Allen, Constance B., Tottenham	Howett, Joan, Stourbridge
Atwell, Gertrude C., Cardiff	Jarvis, H., London
Bailey, A. W., Leicester	Jenkins, K., Birmingham
Barker, G. M., Blackpool	Jones, W., Cwmlllynfell
Bridford, W. C., Prestwich	Kelly, R. W. N., Southsea
Briggs, A. M., Blackpool	Killey, Margaret, Ramsey
Bristow, J. N., York	Kirkham, Sibyl Y., Wallasey
Brothwood, E. W., Birmingham	Lewin, R. M., Kettering
Brown, W. H., Sherwood	Lovesey, N., Hale
Buckingham, B. A., Lee	MacGillivray, G. A., Cairo
Burnard, Sylvia G., Bristol	Marston, P., Hednesford
Cannon, A., Exeter	Mellor, C., Rochdale
Chambers, A. M., Bournemouth	Miller, R. H., Southgate
Cook, A., Chesham	Mills, C. E., Ipswich
Daniel, J., Hastings	Moore, E., Liverpool
Davies, E. H., Bridgend	Moorfield, Phyllis M., Wigan
Dootson, A., Golborne	Morgan, G. H., Cardigan
Duke, H. T., Scarborough	Naylor, Mary R., Leicester
Dyer, Mary E., Ammanford	Newton, W., Manchester
Earp, P. H. G., Wolverhampton	Nicholas W., Aberaman
Ellis, A. R., Penzance	Nicholls, B. F., Bath
Evans, H. J., Southport	Olver, H. B., Saltash
Faulks, A. J., Cardiff	Peace, A. L., Cardiff
Finnikin, J. A., Leek	Poole, G., Manchester
Fisher, Ruth, Worksop	Rawlins, E. A., Chichester
France, H. W., Keighley	Robinson, F. B., Lye
Gavorta, H., Liverpool	Roskrow, J. S., St. Agnes
Gemmell, Elizabeth L., Southampton	Scott, Dorothy F., Heaton
Gordon, S., Leeds	Scragg, Joan, Swadlincote
Goulding, L. W., Wrexham	Seymour, J. M., Leicester
Greaves, W. H., Birkenhead	Sheldon, L. M., Southport
Griffiths, C. V., Whitland	Smith, E. R., Sleights
Hallam, Joyce, Lee	Stewart, W. E., Buckie
Harding, K., Hull	Tanner, A. C. H., Bradford-on-Avon
Herbert, S. P., Folkestone	Twist, W. W., St. Helens
Hickinbotham, C., Alfreton	Waring, A., Sheffield
Hirst, G., Briercliffe	Waterhouse, A. R., Tottenham
	White, F. M., Mountain Ash
	Williams, T. R., Swansea
	Willoughby, L. W., Daventry



## Trade Notes

**KAOLIN POULTICE.**—Stafford Allen & Sons, Ltd., Wharf Road, London, N.1, advertise in this issue StaffAllens kaolin poultice, B.P. Inquiries are invited.

**SANIDENT** is now packed in a modern carton and lined with corrugated paper to prevent breakage. Sanident is made by Thornton & Koss, Ltd., Linthwaite, Huddersfield.

**COSYLAN.**—Parke, Davis & Co., Beak Street, Regent Street, London, W.1, have registered the word Cosylan as a trade mark for their original preparation Syrup Cocillana Compound P. D. & Co.

**BONUS OFFER.**—St. Andrew Mills, Ltd., London, E.17, manufacturers of Samaritan tissue, make a bonus offer, details of which may be obtained on application. Display material is available from the usual wholesalers.

**BIOLOGICAL CONTROL.**—Evans' Biological Institute undertake the biological control of the potent galeenicals, ergot, digitalis, strophanthus and squill, manufactured by Evans Sons Lescher & Webb, Ltd., 54 Hanover Street, Liverpool.

**SHERLEY'S DOG MEDICINES.**—Generous trade terms with extra discounts are obtainable on Sherley's dog medicines which are manufactured by A. F. Sherley & Co., Ltd., 18 Marshalsea Road, London, S.E.1. Full particulars may be obtained on application.

**TOILETRIES FOR WOMEN.**—Cussons Sons & Co., Ltd., Kersal Vale, Manchester, direct attention to the considerable sum of money spent on toilet articles and to the demand for quality, appearance and value which it is claimed are presented in every pack produced by Messrs. Cussons. Chemists are urged to display the special packs of these toilet articles now available.

**HOT-WATER BOTTLES.**—C. J. Hewlett & Son, Ltd., 35-42 Charlotte Road, London, E.C.2, advertise the Charlotte hot-water bottle cover which is obtainable either with zipp fastener or press studs. Various colours and sizes are obtainable, details of which are given elsewhere in this issue. An embossed show-card in four colours is also illustrated and is obtainable free with orders of one dozen.

**EVERFAST NAIL BRUSH.**—Addis Brush Works, Hertford, direct attention to the Everfast nail brush which consists of a non-inflammable handle of resin made by an entirely new process and extra stiff black bristles. The brush cannot slip, however wet or soapy, and it is packed in display boxes of half-a-dozen assorted colours. Supplies may be obtained from the usual wholesalers.

**NAIL LACQUER REMOVER.**—Lamodo has been introduced to remove nail lacquer and at the same time it prevents brittleness and cracking and permits healthy nail growth. This product is well and consistently advertised in the women's Press. Trade terms are given elsewhere in this issue. Orders may be placed with the usual wholesalers direct from Lamodo, Gloucester House, 19 Charing Cross Road, London, W.C.1.

**ROWLAND'S MACASSAR OIL.**—This familiar hairdressing, which has been sold for over 145 years, is in increasing demand, which is assisted by advertising in national, daily and weekly newspapers. The product is packed in attractive wrappers and counter display boxes. Advertising material is also available. Rowland's Macassar Oil is issued in three sizes by A. Rowland & Sons, Ltd., 32 Laystall Street, Rosebery Avenue, London, E.C.1.

**HALIBUT-LIVER OIL.**—Attention is directed to the series of halibut-liver oil products manufactured by Burgoyne Burdidges & Co., Ltd., London, E.6. These include capsules, extract of malt with halibut-liver oil, and emulsion with calcium gluconate, the oil with orange juice, and halibut-liver oil in special dropper bottles. Full details are given on the front page of cover, and there is a generous discount. Details of a bonus offer and specimen pack may be obtained on application.

**TEAS SOLD BY CHEMISTS.**—In view of the centenary celebrations in connexion with the introduction into this country of Empire teas (see page 31), it is timely to recall that chemists

were among the earliest retail vendors of tea. At the commencement of the eighteenth century, China tea, the only kind then available, was regarded as being as much a medicine as a beverage, and chemists were, with coffee houses, the main sources of supply. To-day, many pharmacists sell teas, both China and Empire, and the following brands are of special interest to the drug trade. *Doctor's China* and *Doctor's Ceylon* teas (HARDEN BROS. & LINDSAY, LTD., 30-34 Mincing Lane, London, E.C.3). The proprietors state that the liquor obtained from the Doctor's China tea is more delicate than that from teas from other places of origin, and does not inhibit digestion as stronger varieties do. The Doctor's Ceylon tea is composed of the young leaf edge of selected varieties.—*Mazawattee* tea (THE MAZAWATTEE TEA CO., LTD., Tower Hill, London, E.C.3). This tea is issued under a label on which appears the official approval and recommendation of the British Analytical Control, Ltd., and the proprietors claim that it has been recommended by doctors and analysts for half a century; also that it is specially suitable for dyspeptics.—*Tabloid* tea (BURROUGHS WELLCOME & Co., London, E.C.1). The tea used for this product is described as a pure tea of exceptional quality from which the stem and midrib have been removed; the tea is compressed and each compressed product is sufficient to make one cup of tea.—*Typhoo* tea (SUMNER'S TYPHOO TEA, LTD., Typhoo Buildings, Bordesley Street, Birmingham, 5). The proprietors state that over 19,000 doctors throughout Great Britain recommend this tea in cases of indigestion and other gastric troubles; the tea is a small-leaf brand and economical in use.

## Coming Events

### Sunday, January 15

*Manchester Branch, Catholic Pharmaceutical Guild*, Link Society Rooms, John Dalton Street, at 3 p.m. Meeting.

### Tuesday, January 17

*National Pharmaceutical Employees' Association*, 17 Bloomsbury Square, London, W.C.1, at 8.45 p.m. Mr. H. Skinner on "Assistants' Organisation."

*North London Pharmaceutical Association*, North Library, Manor Gardens, Holloway, N.7, at 8.30 p.m. Mr. J. E. Blackwell on "Business Building."

*Norwich Branch, Pharmaceutical Society, Y.M.C.A.*, St. Giles Street, at 8 p.m. Film show, "Harvest of the Seas."

*Thames Valley Pharmacists' Association*, Three Fishes Hotel, Kingston, at 8.45 p.m. Film show, Mr. W. R. Cruickshank, M.P.S., on "Manufacture of Surgical Catgut."

*Wolverhampton Chemists' Association*, Victoria Hotel, Lichfield Street, at 8.15 p.m. Mr. G. R. Boyes, F.I.C., Ph.C., on "The A.B.C. of Vitamins"

### Wednesday, January 18

*Anglesey, N. Carnarvonshire and Colwyn Bay Branch, Pharmaceutical Society*, British Hotel, Bangor, at 3 p.m. Meeting.

*Liverpool Branch, N.P.U.*, Adelphi Hotel. Meeting. Address by Mr. G. A. Mallinson, M.P.S.

*Manchester Pharmaceutical Association*, Midland Hotel, at 7.45 p.m. Annual whist drive and dance.

*Reading Branch, Pharmaceutical Society*, Cadena Café, Broad Street, at 4 p.m. Conference between Mr. H. N. Linstead, O.B.E., Ph.C., and members.

*West London Branch, N.P.U.*, Stewart's Restaurant, 50 Old Broad Street, W.1, at 8.45 p.m. Meeting. Address by Miss B. Sharples, Ph.C.

### Thursday, January 19

*Birkenhead and Wirral Pharmacists' Association*, Bridge Inn, Port Sunlight. Annual dinner.

*South-East Metropolitan Branch, Pharmaceutical Society*, Woolwich Town Hall, at 8 p.m. Benevolent Fund dance.

### Friday, January 20

*Pharmaceutical Society*, 36 York Place, Edinburgh, at 8 p.m. Meeting. Dr. G. E. Allan on "The Atmosphere, its Structure and Properties." Professor H. Dryer, Ph.D., on "Sex Hormones, Classification and Functions."

**MANFIELD BRANCH, PHARMACEUTICAL SOCIETY.**—The annual dinner will be held at the Swan Hotel, on January 25, at 8 p.m. Tickets, 6s. 6d. each (for the first two) for members; 7s. 6d. each for others.

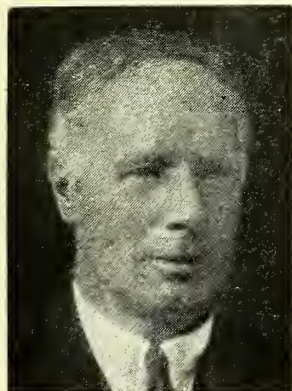


## Marriages

WOOD—HOPKINS.—At St. John's Church, Beeston, Nottingham, on January 4, Henry E. Wood, M.P.S., Beeston, to Rose A. Hopkins.

## Deaths

BARGER.—At Aeschi, Switzerland, on January 6, while on holiday, Mr. George Barger, M.A., D.Sc., F.R.S., Regius Professor of Chemistry in the University of Glasgow, aged sixty.



MR. G. BARGER

Professor Barger was appointed Regius Professor of Chemistry in Glasgow University in 1937 in succession to Professor G. G. Henderson, and for eighteen years prior to this appointment he was Professor of Chemistry in relation to medicine in the University of Edinburgh. In 1903, Dr. Barger joined the Wellcome Physiological Research Laboratories, and in 1909 became head of the chemistry department of Goldsmiths' College, London. Four years afterwards he was appointed Professor of Chemistry at the Royal Holloway College, University of London. In 1934, the Pharmaceutical Society conferred on Professor Barger the Hanbury Medal, and two years later the Chemical Society awarded him the Longstaff Medal. Professor Barger was a member of the Board of Examiners of the Pharmaceutical Society, and as recently as October 12 had lectured to the Glasgow and South-Western Scottish Branch of the Pharmaceutical Society on "Synthetic Drugs as Instanced by Physostigmine and Prostigmin." He has carried out much research work on chemistry in the relation to medicine, particularly on alkaloids and related substances. Jointly with Dr. F. J. Carr he was the discoverer of ergotoxine, one of the specific alkaloids of ergot, and he has published fourteen papers dealing with the chemistry and physiology of ergot. Among Professor Barger's most important contributions to pharmaceutical science is his book "Ergot and Ergotism," which grew out of the Dohme Lectures given by him at the John Hopkins University in Baltimore, U.S.A.

BARTON.—Recently, Mr. Thomas James Barton, M.P.S., High Street, Street, Som., aged eighty-one.

BELCHER.—On January 3, Mr. Charles Herbert Belcher, M.P.S., 74 High Street, Caterham, Surrey, aged sixty-seven.

CHURCH.—Recently, Mr. Charles Edward Church, M.P.S., Lovelace Crescent, Exmouth, aged eighty-three.

DOUGAN.—On January 1, Mr. Alfred Moore Dougan, M.P.S.N.I., 117 Oldpark Road, Belfast. Mr. Dougan, who was a native of Armagh, originally carried on business as a druggist, and became a pharmaceutical chemist in 1930.

GOODFELLOW.—Recently, Mrs. Florence E. Goodfellow, wife of Mr. E. Goodfellow, Ph.C., College Road, Harrow, aged seventy-four.

HAIGH.—Recently, Mr. William Haigh, M.P.S., Beckett Road, Wheatley, Doncaster, aged sixty-one.

HODGES.—Recently, Mr. Edward Henry Hodges, M.P.S., Bournemouth Road, Folkestone, aged sixty-one.

MCGILLIVRAY.—At Surbiton, recently, Mr. Finlay McGillivray, M.P.S., aged seventy-six.

MACINTYRE.—Recently, Mr. Archibald Chalmers Macintyre, M.P.S., Coatbridge, aged sixty-six.

MENZIES.—On January 10, Mr. Maurice Menzies, commercial director of Pinaud, Ltd., London, S.W.12, aged fifty-five. Mr. Menzies had been associated with the company for over thirty years. He leaves a widow and two daughters. The funeral will take place at Streatham Park Cemetery on January 14.

## Personalities

W.BRO. G. H. LONG (H. R. Napp, Ltd.), Cubic Stone Lodge, No. 4720, has been invested with London rank at Grand Lodge.

MR. H. ROFF NEWTON, managing director of Taylor, Brawn & Flood, Ltd., wholesale chemists, Bedford, has been made a justice of the peace for the borough.

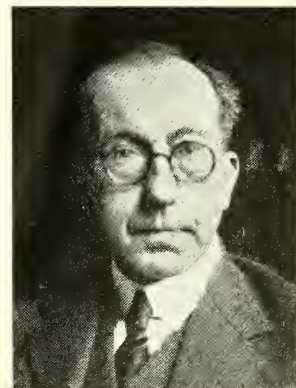
MR. DAVID T. JONES, M.P.S., London, W.1, was among those recently invested by the R.W. Deputy Grand Master, at the Grand Stewards' Lodge, with the honour of London Rank.

MR. C. BAYLEY, M.P.S., Uppingham, was recently appointed vice-chairman of the Finance Committee and of the Medical Benefit Committee of the Rutland Insurance Committee.

MR. A. PROCTOR ATKINSON, who has resigned from the managing directorship of Eucryl, Ltd., Southampton, was on January 6 presented by the staff with a gold hunter watch and chain and an album containing the autographs of every employee. The presentation was made by Mr. Lewis (secretary).

MR. JAMES BROWN, Ph.C., who has been head of the tabloid manufacturing department at the Wellcome Chemical Works, Dartford, for over forty years, retired on December 31. Mr. Brown served his apprenticeship in Bayswater, London, W.2, and qualified in 1890. After gaining further experience in Torquay he passed the Major examination in 1892. Subsequently Mr. Brown was with Blake, Sandford & Blake, chemists, Piccadilly, London, for some years before joining the staff of Burroughs Wellcome & Co., in 1896.

DR. GEORGE SENTER (principal, Birkbeck College, University of London), whose retirement at the end of the present session is announced, was Bell scholar in 1895 and Pereira Medallist in 1896, the year in which he qualified as a pharmaceutical chemist. He was born at Kildrummy, Aberdeenshire, in 1874, and educated at the Public School, Kildrummy, receiving his scientific training in the Pharmaceutical Society's school, and at the Universities of London, Leipzig and Göttingen. He took his B.Sc. degree, with first-class honours in chemistry, in 1900, and later his D.Sc. (London) and Ph.D. (Leipzig). Dr. Senter has been principal of Birkbeck College since 1918; he is a member of the Senate of the University of London and chairman of the University Extension and Tutorial Classes Council. He is the author of a number of publications, notably "Outlines of Physical Chemistry" (1909) and "Textbook of Inorganic Chemistry" (first published, 1911). Dr. Senter's successor as principal of Birkbeck College will be Mr. J. P. R. Maude, M.A., a Fellow of University College, Oxford, and its Dean since 1932.



DR. G. SENTER

## Recent Wills

MR. THOMAS WILLIAM BATES, chemist and druggist, 52 Crouch Street, Colchester, who died on November 2, 1938, has left estate of the gross value of £20,856, with net personality £19,575.

MR. RICHARD GLEAVE HULME, L.D.S., Ph.C., 7 Roseneath Avenue, Winchmore Hill, London, N., who died on July 20, 1938, left estate of the value of £2,540, with net personality £2,228.

MR. DAVID HERBERT MAYOR, 23 Gibsons Road, Heaton Moor, Lincs, retired chemist and druggist, who died at Aberdovey, Merionethshire, on August 22, 1938, has left estate of the value of £11,213, with net personality £10,721.





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## Information Department

### INFORMATION WANTED

W/71 Antonial wine	L/41 Mulso veterinary ampoules
B/10 Colbourne's cough mixture	M/61 Octyl nitrite (actual suppliers)
G/81 Dilantin	B/10 Royal Sovereign tooth picks
B/81 Egg embryo (Tring Clinic)	W/10 Wiborg's pine essence
B/91 Kepalon	



# THE CHEMIST AND DRUGGIST

VOL. CXXX

January 14, 1939

NO. 3075

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## Pharmaceutical Things to Come

THE rapidly-changing face of medicine is well exemplified in the subject of the address given by Professor Gaddum at the evening meeting of the Pharmaceutical Society of Great Britain on Tuesday, January 10 (p. 32). Professor Gaddum's address referred to those particularly potent oestrogenic substances which have come to the fore of recent years. The oestrogenic properties of synthetic compounds are also discussed in the medical Press this week. While, at the present stage of knowledge, it is obvious that pharmacy is not directly concerned with their isolation or preparation, their distribution is certainly likely to be confined to the chemist if, as is likely, they become recognised as weapons in the armamentarium of the physician. Just as the advances in chemotherapy were overshadowed by the successive discoveries and recognition of the various vitamins, so for a time at least it is obvious that since the vitamins have occupied the stage of medical thought and investigation for so long a period, they in their turn will give way to the oestrogenic substances as the centre of medical interest for a time. It is all the more necessary, therefore, for the pharmacist to keep himself informed of these medical advances, for just as the hormone insulin is now a recognised medicament distributed by the pharmacist only, as also are ephedrine and adrenaline, which are sympathomimetic amines having an action which in some degree resembles these oestrogenic principles, so in future when their clinical use is discovered, and administration can be undertaken with safety, then distribution must again be restricted to the pharmacist. It has been seen that the new drugs, sulphanilamide and benzedrine, have quickly become restricted drugs, and as further medical discoveries continue to be made, they in their turn will almost assuredly be restricted drugs in the sense that they can be supplied only by pharmacists. This is a movement which, slow in its beginnings, must inevitably gain momentum as science

progresses and its direction is, we hope, towards the restriction of all but the most simple medicaments to the pharmacist, who is best qualified to handle medicines. It may be noted that the substances connected with the newer discoveries of medicine are extremely potent and are in the true sense of the word "dangerous" drugs. It is unfortunate perhaps that habit-forming drugs were described as "dangerous drugs" when legislation was first introduced in connexion with their manufacture, sale and distribution. In considering such medical advances, the reservation of dispensing for pharmacists, therefore, seems to become less important, especially as, with the effluxion of time, and as insurance schemes grow in extent, dispensing will automatically be reserved to the chemist. It will be wise, therefore, to consider what effect the newer medicines may have in regard to pressing a claim which is of less importance than it was a few decades ago.

As an introduction to modern medicine, we begin in this issue a series of articles dealing with common diseases and their treatment. These articles are written by a medical authority and a well-known lecturer on the subject and should prove of inestimable value as a stepping stone towards the newer medical theories.

## The Markets During 1938—II

WE conclude the review of the markets for the past year (C. & D., December 31, 1938, p. 712) with the following report on essential oils.

Movements in some of the chief oils during the year included anise (star), which weakened from the high figure of 4s. 9d. for tins in January down to 3s. 6½d. in June. From the half-year shipment offers have been severely restricted, but, with the spot demand remaining poor, the market has shown no recovery and was, in fact, rather easier at the close at 3s. 5d. Sales of bergamot, under Consortium control all the year, are stated to have been satisfactory with quotations first at 14s. 7½d. to 14s. 9d., c.i.f. In October, with the cancellation of the export tax, the price was 14s. 4½d., but later moved up to 15s., c.i.f., on sterling exchange weakness. Spot values of Brazilian bois-de-rose weakened to about 5s. 6d. for drums in the first six months, recovering to about 5s. 9d. in October, closing the year dull at about that figure. Camphor oil, white, has experienced a very substantial advance with supplies now scarce. Most of the year there has been no Chinese oil available and only a very restricted quantity of Japanese. By June the London price was quoted at 102s. 6d. per cwt., and from then onwards quotations increased, closing firm at fully 155s. per cwt. Cananga has had a bad year, opening at about 6s. spot and closing at not more than 4s. 9d. per lb. It was thought that with the interruption of supplies values of cassia would harden, but, due to the continued poor demand, the closing price is actually cheaper than the January figure of about 3s. 7d. The demand for citronella oils has been patchy, but mostly rather quiet. On the year values of both Java and Ceylon show a loss and close at low levels. Australian eucalyptus oils have sold fairly well, but eased from time to time, but at the close, the shipment market was firmer.

The value of geranium oils has depended on the quality of the products, but allowing for this variation, prices have declined about three to four shillings on the year. The closing prices for ho (shiu) oil are firm and show an increase of fully 9d. per lb., supplies are very short here. Both spot and shipment prices for genuine hand-pressed Sicilian



lemon oil have been maintained at from 10s. to 12s. per lb., the market only showing a tendency to go under the cheaper figure at the end of the year. Sales of good quality oil to this market are thought to be less than usual, and it has been apparent that many consumers considered the value too high, and either used blended or Californian oils. There is no doubt the oil from the latter source has gained favour in many quarters, and now that supplies available for export look like improving they will no doubt affect the sales value of the Sicilian product.

West Indian distilled lime oil has had a bad year, with sales prices much lower at the close. The value of mandarin largely depended on how much orange oil it did or did not contain. The French Guinea product has commanded the orange oil market and has sold at very low figures all the year, declining from 3s. 7½d. to 2s. 6d. for drums. The Californian distilled oil has sold in fair quantities. The rather weak tone in Palmarosa (Indian) has been due to the offerings of the Java oil at very cheap prices, and it is noted that shipments of the latter product have increased considerably. The value of Singapore patchouli has moved down steadily from 14s. 6d. in January to about 10s. 6d. in December, and the Seychelles product also cheapened substantially. Here, again, the Java oil has been a leading factor in the downward trend of values. In peppermint oils the Japanese product has moved within narrow limits, the usual sudden and temporary fluctuations not being recorded, due, it is stated, to a very much smaller volume of speculative business being transacted. The American natural oil has also been maintained at steady figures throughout. Some Bulgarian oil, said to be of very nice quality, has sold in increasing quantities here. Values of Paraguay petitgrain show a loss of about 6d. on the year, with French oil attracting some attention. Good prices have had to be paid for genuine Spanish rosemary; latterly a Tunis product has sold well at comparatively cheap prices. The controlled prices for Mysore sandalwood oil moved up 1s. 6d. in February and have remained unchanged. Outside oils have been offered at a slight discount. The Australian oil has been quoted steadily. U. S. P. spearmint shows an advance of about 1s. 3d. on the year, the firmer tone being noted from July onwards. Really good Spanish spike has not weakened from the figures of about 5s. 6d. to 5s. 9d., and supplies have been limited; there has been no dearth of cheaper oils. Bourbon vetivert was quite steady for some months at about 22s. 6d. to 24s. per lb., but weakened in September, and by the end of the year good bulk quantities were about 15s. U.S.P. quality wormseed recorded a gain of about sixpence up to mid-December and then weakened sharply, closing with a net loss of about ninepence.

### Empire Tea Industry

THERE was held in London this week celebrations commemorating the centenary of the first importation into London of teas grown within the Empire, namely, in Assam. On pp. 30 and 31 of this issue we record these proceedings and briefly review the history of tea from its earliest days. Except for a number of important brands of medicinal teas, the pharmacist is not today, unfortunately, much concerned with the sale retail of this popular article. Yet, the records definitely show that for many years from the time China tea was first landed here, tea was commonly sold to the public, often in ounce lots, by apothecaries.

In a hundred years the British Empire has become the tea garden and the tea shop of the world. To-day, tea forms, by value, one per cent. of the total of all merchandise entering

world trade. Over seventy per cent. of that tea is produced and nearly seventy per cent. of it is consumed, within the Empire. All the machinery employed in India and Ceylon in the manufacture of tea is of Empire origin. Over sixty per cent. of the chests there used for its transport are imported from Empire countries. In production, manufacture, transport and distribution tea is to an exceptional degree an Empire industry. To commemorate the centenary celebrations the Lord Mayor of London first sealed a casket of two or three pounds of choicest Empire blended tea and then auctioned it, on the cumulative bidding system, the bids totalling £1,156. The casket is to remain sealed until the bi-centenary celebrations in 2039.

### "Medical Press and Circular" Centenary

THE successful survival for a hundred years of a medical journal is no mean achievement, and it says much for the solidity of its foundations, the soundness of its policies and the enterprise of those who have piloted it. On January 9, 1839, was published a journal under the title of "Dublin Medical Press," which has since grown, changed its name through amalgamation with the "Medical Circular" in 1868, and which now occupies a leading place among medical newspapers. To commemorate the hundredth anniversary of the publication, now named the "Medical Press and Circular," and which is the second oldest weekly medical journal in the British Empire, a handsome volume of 127 pages has been specially compiled by Dr. R. J. Rowlette, Dublin, which tells in a fascinating manner the story of the hundred years through which the journal has passed. Its founder and first editor, Professor Arthur Jacob, and his co-editor were outspoken and direct, advocating the reform of medical services and the union of British and Irish medical men in one body. Disputes in those times were often heated, and Rowlette gives evidence of virulence, on both sides, unlikely in these days. In the early pages of the journal, humour sometimes appeared, as in the "apothecary" controversy, when it quoted the advice given to a young apothecary by his master: "Never prescribe a mixture, but always draughts, as one draught costs as much as a mixture, although it might not contain more than a sixth or an eighth the quantity. Take especial care that the draughts be sufficiently strong to make the patient rise six or eight times during the night; this will let him know and feel that he gets some value for his money." Several art plates are included in the volume, among which are those of the founder and past editors of the journal, and those showing the comparison of the title pages of the first half-yearly volumes (1859) of the "Dublin Medical Press" and the second volume (1938) of the "Medical Press and Circular" in its hundredth year. We should like to add our congratulations to the many others which we are sure will reach the "Medical Press and Circular" on its present attainment, and to extend our good wishes for the same success in the future that it has enjoyed in the past.

### An Ingenious Swindle

WE have received from one of our readers a note describing how he was tricked by what was apparently a fictitious prescription. He was handed a script for 100 tab. "testicular" (Hersh Products), which was to be called for later. When the messenger was sent for a supply to the address given on the prescription, New Cavendish Street, London, W., he was charged 19s. 2d. The tablets were not called for, and when they were sent to the address given by the patient it was found there that the person was unknown. A visit to the office disclosed the fact that it had been occupied for one day only. Our correspondent was unfortunately not alone as the victim of what must be described as an ingenious swindle. In one of the London evening newspapers there appears an article written in humorous vein, describing how thirty West-End chemists are waiting for the return of the man in the grey overcoat who presented a similar prescription to these thirty chemists. The tablets supplied, it is reported, were chlorate of potassium. The matter is now in the hands of the police. In the meantime, however, the swindlers have had a good day, having cleaned up at least the sum of £20 to £25. Lest a similar attempt is repeated in other parts of the country, chemists will be well advised to act warily in obtaining expensive medicaments of unknown origin for strangers.



# A Course of Photographic Studies

To assist photographic dealers and their assistants in preparing for the examinations of the Photographic Dealers' Association this series of articles has been specially written for  
THE CHEMIST AND DRUGGIST

## I—History

THE photographic process is unique in that a finished print incorporates the skill and knowledge of artist, physicist and chemist, all three working together and, for the best results, in one and the same person. The artist sees the picture and with the aid of the physicist composes it in his camera. The physicist focuses and exposes the sensitive material, previously prepared by the chemist, who now develops it and, with the aid of the artist, produces a print containing the desired effect. For this reason the development of the practice of photography has been closely bound up, not only with the progress in any one of these branches, but also by the relations between the three.

### Origins of the Camera

The ancient knowledge of vision was scanty. Mirrors and glass are mentioned in the Bible, and glass, of course, has been the product of many civilisations. A lens was discovered in the ruins of Nineveh. It is probable that the use of globes of water, such as mentioned by Aristophanes in 424 B.C., as a means of concentrating the sun's rays, was a common practice of which this is the first written record, but in all probability the original discovery was accidental. In 300 B.C. Euclid published his treatise on optics, which was (like his Geometry) a collection of all previous work, and this contained the first construction of an image by geometrical means. The astronomer Ptolemy, among other things, compiled tables for the passage of light from air to water, but was unable to deduce the law of refraction. In 1100 A.D. the Arab Alhazen first revealed the anatomy of the eye—demonstrating that it consisted of a lens and a screen and that it was exceedingly sensitive and flexible in use. Vitellio published all these facts in Europe in 1270, and the spread of knowledge and culture resulted in their wide dissemination. The formation of natural images produced by small holes had been recorded by Aristotle, and B. Porta is credited with the discovery, in 1553, of the "camera obscura." A dark room overlooking a garden scene which was projected on a white surface by a pinhole in the wall or roof. A sketch by Leonardo da Vinci clearly shows the principles of the pin-hole camera, and he described the function of a lens in 1559. In 1568, D. Barbarro was recommending the use of such a lens in the camera, and advocated stopping down for depth of focus. Benedetti (1595) used a plane-convex lens, and Kepler, the astronomer, propounded the laws for combinations of lenses. From then on better lenses were used and the portable camera came into general use for sketching. There was as yet no idea of a chemical record, temporary or permanent, save what the artist could produce with brush, pen or pencil. Roger Bacon in England, although his words are vague, certainly knew something of telescopic vision; and though their function may not have been appreciated, spectacles were in use at this time. They are, of course, mentioned by Shakespeare in his plays. Knowledge of the properties of lens systems and the fundamental nature of light, and the application of this knowledge to all facets of scientific research, such as astronomy and microscopy, progressed rapidly from this time on. These advances are associated with many famous names—Descartes, Newton, Huyghens, Young, Fresnel, Maxwell, Rayleigh, Lorentz, Michelson, Einstein—which carry us up to the present day.

### Origins of the Photographic Process

Retracing our steps to Pliny, 100 B.C., it is recorded that he noticed the action of sunlight in tanning the human skin and in bleaching yellow wax. The early centuries after Christ, in which the Arabs were the only chemists of note, were wasted in cabalistic experiments searching for elixirs and touchstones, the one to prolong life and the other to make gold. In 1556 Fabricus prepared "silver horn"—or nitrate—and recorded that it was blackened by sunlight. In 1717 a German chemist, Schultze, in treating chalk with nitric acid used some acid

previously contaminated with silver. The silver nitrate he produced blackened on exposure, and he was able to isolate the effect, show it was due to the silver and produce stencils in bottles of liquid with opaque letters. A Swedish chemist, Scheele, exposed coated paper to the solar spectrum and showed that the effect of the violet light was much greater than that of the red. Years later Sir John Herschel discovered that the ultra-violet rays, invisible to the eye, had an even greater effect than the violet. Dr. Lewis, in England, repeated these experiments, and his notebooks and his assistant passed later to Josiah Wedgwood, the famous potter, whose son Thomas published in 1802 a paper with Sir Humphrey Davy on the reproduction of stencils on glass and leather by this means. Wedgwood also tried to make prints in the camera obscura, but was unsuccessful. Davy, however, did succeed, using a solar microscope, observing that he must hold the sensitised paper near the lens so as to get a small, intensely bright image. Curiously enough, the greatest difficulty they experienced was in "fixing" the silver image, or preserving it from being overwhelmed by further blackening when they examined it in the light. Davy, as a chemist, ought to have known that ammonia or salt would dissolve away the unexposed silver salt, leaving the silver image behind; but it was not until 1839 that Herschel, who had discovered sodium thiosulphate ("hypo") in 1819, suggested it could be used for this purpose; fixation by this means proved so practical that hypo has been used in exactly the same way ever since.

### Niepce Produces the First Photograph

Meanwhile in 1822, a Frenchman, Niepce, had managed to produce the first photograph. He used a camera such as Boyle and Newton had used to observe natural objects, but caught his image on a plate instead of the eye, as they had done. His plate was metal or stone coated with asphaltum, which he had found was rendered insoluble in aromatic oils by the action of light. He dissolved away the unexposed layer and used the plate for printing—etching in the usual way.

### The Daguerreotype Process

Niepce entered into partnership for ten years with a painter, named Daguerre, a fellow countryman, in 1829. Until his death in 1833 they were actively engaged in improving this process. After his death, Daguerre continued on his own lines. In 1831 he had experimented with silver-coated copper plates. These were fumed with iodine to give a layer of silver iodide. To produce a direct negative required an impossibly long exposure, but by accident he discovered that after only a short exposure mercury could be deposited on the exposed parts—even though there was no visible effect in the camera—thus giving a positive print. This, then, was the Daguerreotype process—the first practical system of photography depending on the action of light on silver salts. The process, though costly, produced beautiful and permanent results and was deservedly popular. It differs vastly, however, from our modern ways, the foundation of which is due to Fox Talbot.

### The First Photograph on Paper

Fox Talbot, having unknowingly repeated Davy's experiments, prepared paper coated in common salt and brushed over with silver nitrate. This, however, still required an exposure of over one hour. In 1835 he made the first photographic negative on paper—now preserved in the Science Museum; this was a picture of a lattice window, made by repeating the coating of the paper several times and exposing wet, thereby reducing the exposure to ten minutes. Daguerre had discovered that silver bromide was more sensitive than iodide, but Fox Talbot in 1840 was using the iodide together with weak reducing agents, such as gallic acid and silver nitrate. Further—and this was by far the most significant discovery—he was able after only half a minute's exposure to produce the



same result by going over the paper, after exposure, with the same two solutions. This was the beginning of development of a latent image and opened up the way to our modern technique. This first negative he saturated with wax, thus rendering it transparent, and printed through on to similar paper. The whole process was known as the Calotype process. Thus both the Daguerreotype and Calotype processes were in use in 1840, but the latter is much nearer to our present methods. In 1839 Bayard was using a direct positive process—paper was sensitised by ammonium chloride and silver nitrate, completely darkened by pre-exposure, then immersed in potassium iodide and used wet in the camera. The action of the light bleached the silver to nitrate again, leaving a positive print. At the same time Reade described a process of sensitising paper, first in silver nitrate solution, and then in a second bath of gallic acid for greater sensitiveness, with subsequent fixing with hypo.

### Wet and Dry Collodion; Gelatin

Glass was first substituted for paper by Niepce de St. Victor in 1847. He used a silver-iodide-impregnated albumen coating, bathing it in silver nitrate before exposing it in the wet state. Pyrogallol later replaced gallic acid as the developer. Collodion, which is still in use in process workrooms to-day, was produced by Schoenbein in 1846 by nitrating cellulose, and Le Gray suggested its use in photography. Frederick Scott Archer published in the "Chemist" of March 1851 the first description of the collodion process. An iodised collodion coating on clear glass was allowed to set, immersed in silver nitrate solution just before use, exposed wet, developed in ferrous sulphate developer, intensified and fixed in potassium cyanide. Negatives produced by this means are in many ways as good as those obtained to-day, but the process was clumsy and inconvenient and the sensitiveness very low. None the less, it at once displaced all other processes and reigned supreme for thirty years. As a result the "Black Art" was established and the Royal Photographic Society founded in 1853 and the "British Journal of Photography" in 1854. The disadvantages of the wet-collodion process were early recognised, particularly the fact that the coating was extraordinarily frail, breaking at the slightest touch; but dry plates, or those coated with gelatin (J. Hill Norris), were much slower. In 1874 Sayce and Bolton marketed the first really successful dry collodion plates: exposures were of the order of thirty seconds at  $f/16$ .

Niepce St. Victor had long before this, in 1847, unsuccessfully experimented with sensitised gelatin, and Gaudin had recognised in 1853 that silver bromide is more sensitive in gelatin than the iodide; but it was not until September 8, 1871, when Maddox published a paper on an "Experiment with Gelatino-Bromide," that the modern emulsion as we know it was born. Gelatin is an amorphous brittle substance, nearly transparent, tasteless and inodorous. It is obtained from hides, feet and tissues of oxen and calves. It is steeped in lime water, washed and bleached, then washed again, extracted with steam and set on large slabs. Maddox dissolved the gelatin in water and added cadmium bromide and silver nitrate: all his emulsions had excess of nitrate and were unwashed.

### Beginnings of the Photographic Industry

King, in 1871, washed out the excess silver salt in a bladder, and Johnson shredded the gelatin first before washing it, as is done to-day. Burgess in 1873 produced a dry plate with a secret formula, and was the forerunner of the present manufacturers in this respect. Richard Kennett at this time marketed a dry pellicle—simply a thick emulsion stripped dry from the glass and sold in packets. In 1874 the Liverpool Dry Plate Co. was founded by Bolton, who emulsified only a little of the gelatin and added the bulk later. In 1877 Wratten introduced the alcohol method of washing emulsion. The next big advance was in 1878, when Bennett showed that digestion of the emulsion for several days at a high temperature greatly increased the sensitivity. The high sensitivity of gelatin emulsions is still obtained by digestion, though more generally at a lower temperature and in the presence of ammonia (Johnson, 1877 and Eder, 1880). Certain slight impurities in the gelatin may affect the properties greatly and a pure, consistent supply of gelatin is essential. Wratten and Wainwright, of Croydon, advertised and produced plates from 1877 to 1913; their products were at least ten times faster than collodion, and such was the hold that collodion had gained that for some years this high speed was considered a disadvantage. However, a race in material speed between rival manufacturers set in dur-

ing 1882 when the speed of present slow materials had been attained, and the competition in speed is still in progress.

In 1880 George Eastman started the production of dry plates at Rochester, United States. The idea of using a sensitised film in a roll had been proposed by Spencer in 1857, and in 1884 John Carbutt, in Philadelphia, had made an emulsion-coated celluloid; but the year 1891 first saw the introduction of daylight loading spoons. The original roll-film holder is credited to Hannibal Goodwin: the first Eastman roll-holder employed paper rendered transparent by a wax treatment: in 1885 the Eastman-Walker roll-holder consisted of a stripping paper with soluble gelatin between the emulsion and paper, separated by floating apart in warm water. Three years later the first roll-film camera appeared, the Kodak of 1888, supplied with a 100-exposure stripping film linked with the slogan "You push the button and we do the rest." Progress was maintained with the introduction in 1913 of non-curling film coated on both sides with gelatin, and of cellulose-acetate safety film base by Eastman Kodak in 1923. Great improvements in increased and extended sensitivity of emulsions have come from time to time. The sensitive coating as it is now known is composed of bromide and iodide of silver held in a thin coating of gelatin. This gelatin is dissolved in hot water, and the silver salts are precipitated in finely divided form by strictly controlled chemical reactions in the solution, and the resulting creamy emulsion is then allowed to set. The gelatin is shredded and washed, then digested to give the desired speed, and finally coated into the prepared film base.

### Bromide Printing Process and Its Rivals

Paper for positive printing had similarly developed from the original Calotype paper which was in use up to 1860. In those days, before the days of large D. & P. houses, the prevalence of amateur printing led to the perfecting of many "control" printing processes. First of all Calotype was superseded by albumen-silver-chloride papers, in 1860: then, in 1864, collodio-chloride paper was introduced successfully as Aristotype. Willis brought out Platinotype in 1873, in which ferric oxalate and potassium chloroplatinate paper was exposed and developed to deposit platinum and give prints of beautiful gradation and great permanence: this printing process remained in limited use until the present decade. The Liverpool Dry Plate Co., in 1874, produced the first bromide paper, but this had to be handled in a darkroom and needed development like the negative materials. In 1882 Abney introduced the gelatino-chloride paper (Maddox had prepared gelatin emulsions in 1871), and as the familiar "P.O.P." printing-out paper this has been in use ever since. It contains excess of silver nitrate, is printed by daylight, and fixed in a combined toning and fixing solution containing hypo and gold salts. Although still in amateur use and still manufactured it is rarely used now save for rough proofing. The high sensitiveness of bromide paper, which is a disadvantage for contact work, led to the introduction of the slower "gaslight" paper: in 1894 Dr. Baekeland, of the Nepera Chemical Co., introduced Velox paper, which had a slow unwashed chloride emulsion and could be handled in weak yellow gaslight; it gave a characteristic blue-black tone much valued by some workers. Meanwhile another type of printing process was progressing—one that was going to have great application in the field of colour photography. In 1839 Porta discovered that bichromated gelatin was rendered insoluble by the action of light. This effect was applied by Poitevin in his patent of 1855, in which an impregnated bichromated gelatin record was used. Commercial success on these lines was first realised by J. W. Swan's carbon process, and he marketed carbon tissue from 1864 onwards: the Autotype Co. still maintains the manufacture. It was not for forty years or more that a modification of the carbon print, in the form of the "carbro" process, was introduced by Thomas Manley in 1905: it was followed in 1907 by Welborne Piper's "bromoil" process—ever so popular and capable of results nearer to the artist's than any other control process yet devised. Chloro-bromide papers, intermediate in speed between gaslight and bromide papers, are very much used by advanced workers because of the control of tone from warm black to red possible. Specially sensitised chloride papers have recently been introduced—fast warm-tone papers. Apart from this advance most of the work on papers has been confined during the last twenty years to improvements in gradation and latitude, resistance to staining, keeping quality, bases and general consistency.

(To be continued.)



# Diseases and Their Treatment

This series of articles has been specially written for THE CHEMIST AND DRUGGIST by a Physician and Lecturer

## I—Respiratory

### Acute Bronchitis

BRONCHITIS is an inflammation of the delicate lining membrane of the bronchial tubes and is most commonly met with in infants, children and elderly persons. Its incidence is greatest during the spring and winter months. Onset may be due to a chill, and is quite a common complication of such infectious diseases as measles, whooping-cough and influenza. Infants suffering from rickets are very liable to be affected with bronchitis, while patients with heart or kidney trouble are specially prone to suffer from it. At the onset the patient has the usual symptoms of a common cold. There is often a certain degree of hoarseness and heaviness present. The temperature is raised, usually from  $101^{\circ}$  to  $103^{\circ}$  F. Cough very soon develops, and a characteristic feeling of tightness in the chest with a sensation of rawness behind the breast-bone. At first the cough is dry, but presently there is expectoration of white and frothy material. As soon as the cough becomes loose, and the expectoration becomes freer the symptoms tend to abate. There is now a tendency for the cough to come on in paroxysms, and for the expectoration to become thicker and more purulent in character. At the onset the patient should be put to bed with hot-water bottles and be given a hot lemon drink. The chest may be rubbed with some stimulating liniment, and a fever mixture containing liq. ammon. acet. administered every three or four hours. The bowels should be kept open by means of calomel followed by a saline. For the dry cough a mixture containing tinct. ipecac. and spt. æther. nit. is helpful. When the cough becomes looser the indication is to favour expectoration and to render the sputum easy of expulsion. At this stage a stimulating expectorant containing ammon. carb. is advisable. Mustard and linseed poultices are often beneficial. In the final stage opiates such as tinct. camph. co. should be ordered. During convalescence tonics containing tinct. nuc. vom. and also cod-liver oil emulsion are helpful in promoting recovery.

### Chronic Bronchitis

This is very commonly met with in the later years of life, and especially amongst the working classes. Every winter the cough tends to recur. Changes take place in the chest which renders the patient more or less breathless and tend to cause disorders of the heart and circulation. The patient's chief symptoms are cough and shortness of breath, the latter being most marked on exertion. The expectoration is copious, most marked in the early part of the day and tends to be somewhat purulent. In time the heart becomes seriously enlarged, and in due time the circulation shows signs of failure so that the patient's ankles begin to swell at night and his breathlessness becomes much more marked. Such patients must guard against chills, and in very cold weather should remain indoors. They should take cod-liver oil during the cold season, and when the cough and breathlessness become marked iodides should be administered along with ammon. carb.

### The Pneumonias

There are two varieties of pneumonia, both of which are caused by the bacillus of pneumonia, either alone or in association with other micro-organisms—the one is termed lobar, and the other lobular, pneumonia.

In lobar pneumonia, the lung, lungs or part of a lung is solid. This solidity is due to the entrance of inflammatory products into the air spaces. Thus air can no longer enter the affected portion of lung tissue. Pneumonia is most frequent during the spring and winter months. It is generally brought on by a chill, especially when the patient is run down or is an alcoholic. Four types are recognised, and antisera are used in the treatment, but so far only the one containing antibodies to the first type has proved successful. It is stated that its use has reduced the mortality rate by one half. A concentrated Type I serum is now being largely used. The symptoms of

lobar pneumonia are very typical. The patient has a shivering fit, complains of a pain in the side of the chest, and the temperature runs up at once to  $104^{\circ}$  F. The breathing is rapid and there is a constant, harassing and short dry cough at first. Later on the breathing becomes very distressed and the patient coughs up a quantity of tough, tenacious rust-coloured, sticky sputum. The temperature continues high, with slight morning remissions until about the eighth day, when it suddenly falls to normal. This fall is accompanied by profuse sweating and extreme prostration. In the treatment of pneumonia nursing is all-important. Death is generally due to heart failure, and the patient must be moved as little as possible. On no account must he be allowed to sit up in bed. When the temperature has fallen the greatest care must be exercised to prevent any unnecessary movement for some days after the crisis. This is most important. Pneumonia is a self-limited disease, and by watching the heart and by careful nursing the patient is likely to recover, especially if diet, bowels and sleep are attended to. Brandy is probably the safest and best stimulant in cases of pneumonia. Alcoholic patients have a very poor chance, and often succumb to this disease.

Lobular pneumonia or broncho-pneumonia (not bronchial pneumonia) is microbic in origin. In these cases there is an inflammation of the smaller bronchial tubes (a capillary bronchitis, as it is termed, which rapidly extends and invades the aerating tissue of the lung or lungs). It is very common in children, especially during attacks of measles and whooping-cough. In old age it is met with in cases of heart, arterial and kidney disease. Tuberculous subjects are also liable to suffer from broncho-pneumonia. The symptoms are cough with expectoration, rapid breathing and a temperature of  $103^{\circ}$  F. or more. The temperature tends to swing, and always falls by degrees, unlike the temperature in lobar pneumonia, which shows a sudden return to normal. In the worst type of case the lips may be blue and livid. The risk in these cases is not heart, but respiratory, failure. Treatment is much the same as in cases of severe acute bronchitis. Infants and children should wear a jacket of gamgee tissue over the chest. Alcohol is a most useful remedy here.

### Pleurisy

The outer covering of the lung is termed the pleura, and when this is inflamed the disease is known as pleurisy. (Perhaps a better term would be "pleuritis.") This complaint may be due to a chill, and rheumatic or tuberculous subjects are more liable than normal individuals to suffer from pleurisy. It is also met with in cases of lobar pneumonia, tuberculosis of the lung, fracture of a rib, and lung tumours. The most characteristic single symptom is pain in the side of the chest, which is aggravated by coughing or taking a long breath. There are also cough and a slight rise of temperature. This condition is often wrongly diagnosed as rheumatism or vice versa. When a diagnosis of pleurisy has been definitely established the patient should be kept under observation lest the condition may be indicative of more serious trouble, such as tuberculosis. In the treatment of pleurisy, local applications, such as mustard and linseed poultices, or iodine are most beneficial in relieving pain and allaying the inflammation. A sedative mixture may also be given to check the useless and often very troublesome cough.

### Asthma

This term is often applied to breathlessness resulting from heart disease and certain other maladies. It should, however, be reserved for cases of bronchial or spasmodic asthma alone. Bronchial asthma is a condition characterised by paroxysmal attacks of extreme breathlessness which tend to come on quite suddenly, often during the night. The breathing is very wheezy and the forehead is covered with cold sweat. The patient is very distressed and looks anxious. The face is pale and the lips blue. The patient gets out of bed, rests his arms on the sides of a chair, and greatly desires air. After a time he brings



up a small amount of viscid sputum, which gives relief. The underlying cause of the majority of cases of asthma is some foreign protein to which the particular patient is specially sensitive. Pollens of grasses and flowers, the hair of horses and cats, and certain foodstuffs (especially eggs, milk and fish) may bring on an attack in persons predisposed to asthma. In some cases there is present an abnormal condition of the nose or throat, such as polypi, enlarged tonsils and adenoids. In women diseases of the genital organs may be a potent factor. In treating an attack of asthma adrenaline and ephedrine are generally employed. On no account should chloroform or morphine be used. The nose and throat should be examined, and any abnormality found present treated. Various powders are used for inhalation. Most of these consist of the dried leaves of belladonna and stramonium. The tincture of stramonium is also sometimes given internally with benefit.

## Oxygen Tents

By S. J. Hopkins, Ph.C.

VARIOUS breathing chambers have been devised from time to time in the endeavour to find a more efficient method of administering oxygen than that of the funnel or nasal catheter. The early oxygen chambers, such as those used during the Great War for the continuous treatment of gas poisoning from chlorine, phosgene, chloropicrin, etc., were made of plate glass, with wooden frames. These structures had double doors arranged on the air-lock principle, and, on account of their large size, were expensive to install and maintain. Adequate cooling of these chambers was difficult, as large supplies of oxygen were necessary, and so the portable oxygen tent was evolved to meet the demand for a more practicable device.

### Sir Leonard Hill's Invention; Improvements

Among the first bed tents was that invented by Sir Leonard Hill in 1921. This consisted of a more or less air-tight fabric mounted on a collapsible framework, and fitted with a window of non-inflammable celluloid. The air of the tent was constantly withdrawn, passed over soda-lime (to remove carbon dioxide) and then passed back into the tent by means of a mechanical pump; oxygen was added as required, in order to maintain the required proportion. The chief drawback of this type of tent was the tendency to get too hot. Later workers made considerable modifications in order to reduce the temperature, adopting such devices as passing the air through coils immersed in ice-cold water, or by incorporating large ice-boxes, with motor fans to circulate the air. Many of these earlier tents were made of a fabric that was permeable to carbon dioxide but relatively impermeable to oxygen, so that with ordinary use the carbon dioxide given off by the patient did not accumulate, and treatment with soda-lime was not always required. A marked improvement in oxygen tents was brought about by the replacement of the motor ventilating fan by the oxygen injector. This device works on the same principle as that of an ordinary filter-pump. The injector, which includes a pressure-reducing valve and flow meter, delivers oxygen from a cylinder at a constant rate, and at the same time causes the air to circulate through the carbon dioxide absorbent. The newer types of oxygen tent, such as that developed by Poulton, are much cooler in operation and have arrangements for eliminating the water-vapour given off in the patient's breath, which may amount to as much as ten ounces in twenty-four hours.

In the earliest Poulton tent the cycle of operations is as follows: The oxygen, coming through the injector A, passes through the carbon-dioxide absorbent B, into the tent, and then back to the injector. The cooling apparatus consists of two metal canisters C, fitted with flanges, so that when the canisters are let in through the top of the tent, an air-tight joint is made. The tins are filled with ice, which not only cools the air, but also condenses the water-vapour given off by the patient. The water runs down into two funnels D and is collected outside the tent by rubber tubing. It is necessary to have the free ends of the tubes dipping into water and thus acting as an air-lock. If this precaution is not taken, there will be a leak between the atmosphere of the tent and the outside air. A small tube is usually fitted for collecting samples of gas for analysis. The usual percentage of oxygen

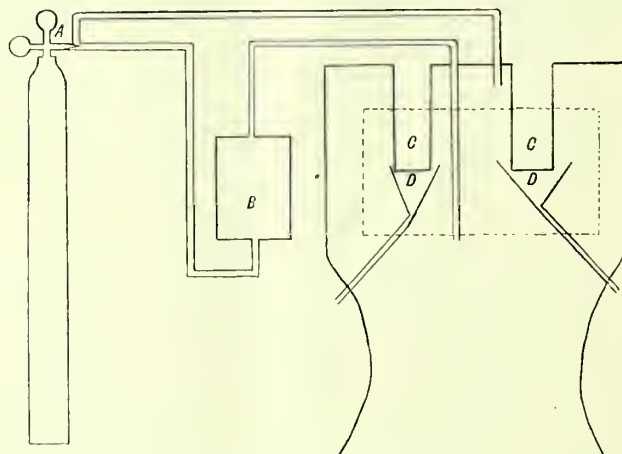
### Pulmonary Tuberculosis

So many cases of "consumption" are quite overlooked that it is most important that the very earliest symptoms should be known. Many a young man or woman who is becoming pale and thin are really victims of this disease. Loss of weight is always a very suspicious sign, and should receive immediate attention. In young people it may indicate the onset of tuberculosis or of diabetes mellitus. Cough, when superadded to loss of weight, is another symptom of great importance, more especially when it develops or continues after an attack of bronchitis, pneumonia or influenza. If a patient who has a chronic cough and is persistently losing weight begins to spit up blood, a diagnosis of tuberculosis of the lung may almost certainly be made. Never give such persons a cough mixture. Advise them to consult a doctor without delay.

in these tents is in the neighbourhood of 50 per cent. This concentration can be kept up by the supply of two to three litres of oxygen per minute, provided that the tent is made of air-tight material, and sources of leakage are attended to.

### Removal of Carbon Dioxide

The removal of the carbon dioxide from the tent is of considerable importance. Several substances have been tried as absorbents, but soda-lime is usually the substance of choice. Soda-lime can now be obtained already impregnated with an indicator; this is of value for determining when the absorption canister is approaching exhaustion. It is necessary to determine from time to time the percentage of oxygen and carbon



POULTON OXYGEN TENT

A = Injector. B = Carbon-dioxide absorbent. C = Ice containers. D = Funnel. Dotted rule indicates window.

dioxide in the atmosphere of the tent. Absolute accuracy is not required, and special pipettes are available which give results within five per cent. of those obtained by the more orthodox methods of gas analysis. The oxygen is estimated by absorption in an alkaline solution of pyrogallous acid, and the carbon dioxide by absorption in caustic soda solution. A number of improvements have been made to the motorless oxygen tent as outlined above, particularly with regard to the cooling apparatus. The canisters in the roof of the tent are now replaced by a detachable unit fitted to one side of the tent. The carbon-dioxide absorbent canister is often attached to this ice-box, and the direction of flow is such that only cool carbon-dioxide-free air is admitted to the tent. The large size of modern oxygen tents, with their adequate windows and ventilation, eliminates any claustrophobic reactions on the part of the patient and it is of interest to note that suggestions have been made to the effect that oxygen tents of the closed circuit type should be opened up at intervals, and the air within replaced by normal atmospheric air.



# Clearing Christmas Remainders

It is inevitable that there will be odds and ends left over after Christmas, even at the busiest shop, but some retailers seem unable to decide the best methods to adopt to clear their shelves of surplus stock. While some lines will keep indefinitely, it must still be remembered that stock locked up is money lying idle. Christmas stock can be divided roughly into three classes:—Toilet goods, such as soaps and perfume, in fancy boxes; Christmas-wrapped items or seasonal novelties; and fancy goods. Even if there is no January stock-taking it is a good plan to list all Christmas left-overs and to summarise the various packings to be disposed of. First of all, Christmas tags, labels and, of course, any wrappers with holly and mistletoe patterns, should be removed. Special efforts must be made to ensure that any dated goods such as calendars and diaries are sold as quickly as possible, although calendars can often be re-tabbled for another year. Gift boxes containing toilet soaps, perfumes, shaving creams and talcum powders should be opened up and the contents sorted out and placed on the shelves amongst the regular stock. The empty boxes should not, however, be thrown away. It is advisable to write in pencil on the bottoms of each of the boxes a list of the contents, so that any customer who requires a gift box can have one of them re-assembled from stock. It is sometimes difficult to remember the exact contents of gift boxes and this scribbled list is the best method to adopt to keep them serviceable. The dainty boxes can also be used in window dressing as small display stands or as backgrounds for the items contained in the boxes. If it is decided to keep the soaps, etc., inside their boxes, it is a good plan to wrap up the boxes in tissue paper or cellophane. Soaps and shaving creams do not deteriorate by being kept, but the more goods kept the less space there is in the stockroom for new lines and the more money tied up. Perfumes enclosed in the vanity packings are usually the popular small sizes which sell throughout the year.

## Novelties

Novelties are often a problem. Those which are virtually dated by the year of their first appearance—such as Snow White novelties this season—should be sold as quickly as possible. They can be suggested to shoppers requiring goods for birthday presents, and are especially suitable for introducing to mothers who come to buy gifts for their children to take to the little host or hostess of a party. Items featuring Father Christmas or reindeer will have to remain in stock until next winter. Glass wares should be packed away in tissue, but at least one article in each batch should be put in cellophane, so that the line can be at once identified when stocktaking prior to ordering for next Christmas. There is no need to worry if a small stock of novelty perfumes or soap figures is left over. These can be displayed at Easter, for there are many people who try to break away from the eternal soap eggs when buying toilet novelties as Easter gifts. Great care must be taken in handling transparent-wrapped goods that have remained in stock for some time. The transparent tissue is apt to become brittle and snap, so that most customers guess the article is old stock. Such goods should be re-wrapped at the end of January—especially boxes which do not have ordinary lids but merely the transparent sheets. Often handkerchief puffs and similar wares are packed in lidless boxes with transparent tops, and if the material cracks the contents soon become soiled. In replacing the transparent material, it should be moistened so that as it dries it tightens on the lid. If there are several boxes of one colour left, to avoid unwrapping and recovering several times the colour may be marked on the wrapper. A point to remember is that Christmas greeting cards should first be taken out from these packages; in this way any reminder that the goods are left over from Christmas is removed. It does not look businesslike to remove the ticket in front of the customer or to take the box behind a counter in order to slip out the ticket. Another factor to bear in mind is that the fashionable colours of one winter are not always popular the next, so that any opportunity that offers of disposing of fashion goods should be seized. Compacts sell throughout the year, but surplus Christmas stock can often be sold more speedily by suggesting them as prizes to the organisers of whist drives and dances. Cameras can also be shown to such people, but these and other photographic appa-

ratus, in case no purchaser appears earlier, should be carefully wrapped up, either in tissue or in transparent material, and put by until Easter, after checking that the price tickets are firmly fixed on. When cameras are brought out again, the seller should make certain of comparing these figures with the Spring list prices in case the manufacturers have reduced or increased retail prices. Razor sets are usually doubly packed—a cardboard "Christmassy" wrapper covering the ordinary standard packing; this Christmas box should be removed. If, at ordinary times, there is not much sale for razor sets it is a good plan to sell the blades and replace these if a customer asks for a set, thus keeping the blades fresh.

## Gift Stationery

Boxes of gift stationery consisting of notepaper and envelopes are liable to remain unsold unless something can be done to promote sales. Wherever possible, an offer to have the address printed for a small additional fee usually effects a sale. A local printer will usually co-operate in this matter, and the retailer should be content to charge the same price as the printer—clearing the line being sufficient reward. Boxes of table stationery (which usually include d'ouley sets and coloured serviettes) can be used up in window dressing or sold cheaply to nearby café or restaurant proprietors. It is policy to try and avoid a "sale" of Christmas remainders. Far better is it to sell the goods gradually during three or four months than drastically to reduce prices during the quiet days of January and thereby reduce profits and, possibly, lower one's prestige also. On goods that are not at a standard price, reductions can be made, but with patience most stock can be cleared without a reduced-price sale.—F. A. K. (7/1).

## Vitamin D Recipes

PALATABLE forms of supplying vitamin D are discussed by Lindsay and Mottram in the "British Medical Journal," January 7, p. 14, and details of several domestic recipes are given. Two exceptions to the belief that natural sources of vitamin D are expensive, the authors state, are herrings and tinned salmon. It is estimated that the herring contains 600 to 1,000 units per 100 gm., and tinned salmon 200 to 800 units per 100 gm., i.e., a moderate helping of approximately three and a half ounces, and this may be regarded as sufficient vitamin D for one day. As no process of cooking or canning does any harm to vitamin D, cooked or canned fish can safely be used as a source of the vitamin. A new form of administering vitamin D is in the form of sauce, mayonnaise, soup, etc., where fish-liver oils can replace part of the fat used as an ingredient.

**SAUCE.**—Heat gently together one tablespoonful of cod-liver oil, half an ounce of flour, a little salt, pepper and anchovy essence in a pan, and add half pint of milk (off the boil). Stir till boiling. One tablespoonful yields 40 to 200 units of vitamin D according to the quality of the oil.

**MAYONNAISE.**—Mix one yolk of egg, half a teaspoonful of sugar and half a saltspoonful each of salt, pepper and mustard. Add slowly, whisking well, two ounces of cod-liver oil. Whisk in one tablespoonful of lemon juice and one of Worcester sauce. Add a further two ounces of cod-liver oil and whisk well. Add a little extra lemon juice or vinegar to flavour. Finally stir in one or two tablespoonfuls of milk to produce a mayonnaise of the required consistency. One tablespoonful contains from 1,700 to 8,000 units of vitamin D.

**SOUP.**—Remove the eyes from a small cod's head, wash and heat with a small piece of carrot, turnip, half an onion, a bunch of herbs in one and a half quarts of water. Skim just before boiling, simmer slowly for one hour. Strain the stock off; mix one and a half ounces of flour with two ounces of cod-liver oil, add to the stock and bring to the boil. Half a pint contains from 375 up to 1,500 units of vitamin D.

**BATTER.**—Mix two ounces of flour, one ounce of bread-crumbs and seasoning, add one tablespoonful of cod-liver oil. Add sufficient milk to produce a coating consistency, beat for a few minutes and cool.



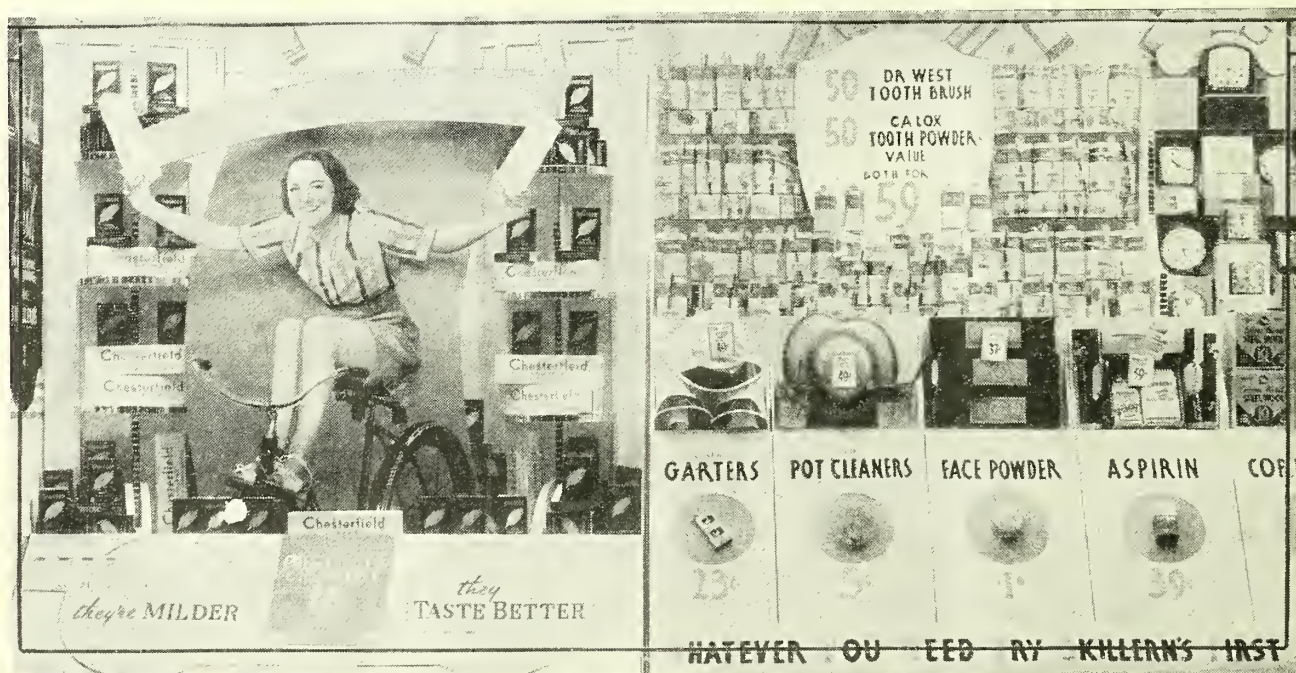
# United States Drug Stores To-day



AN EXTREME EXAMPLE—Ladies' hosiery counter and display of men's ties at a drug store at Dallas, Texas.

THERE is logically no difference between the departments that tend to obscure the pharmacist's true function in the United States and those which are accused of doing the same thing in this country; in fact, American pharmacists might possibly be scandalized by the association of, for example, hardware with medicinal preparations—a not uncommon grouping over here. But there is a difference in kind. In the United States the extraneous departments are usually concerned with soda fountains, candy (confectionery), and cigars, all of which sections are fairly frequently encountered. Other non-pharmaceutical merchandise is occasionally raised to the dignity of a distinct department, as in the premises illustrated on this page. Thus Marvin's Pharmacy, Dallas, Texas, includes a ladies' hosiery department, for which some sort of justification is put up in that the hosiery counter affords opportunities for making companion sales of cosmetic products. The department shown is placed next to the cosmetic counter, and each department brings business, it is stated, to the other, and, to quote a statement by the proprietors, "we are open at night and on Sundays. This helps us sell two different kinds of hosiery; one to the working girls, who need service weight, and the other to society girls, who discover a run in their hose while dining or dancing at some night spot." A United States correspondent, writing to *THE CHEMIST AND DRUGGIST* about such pharmacies as this, stated: "If you are persistent in seeking to purchase such mundane things as medicines or your physician insists that you must have his prescription made up, you will eventually discover the proper department."

It is but fair to add that an opposite tendency is at work in the United States. A movement towards a return to "pure" pharmacy, or at least towards "ethical" trading appears to be gathering momentum. A number of pharmacies have been opened within the last year or two from which soda fountains and lunch counters have been excluded, and greater emphasis has been laid on the dispensing ("prescription") side of the business. Moreover, a monthly journal appealing solely to ethical or "professional" pharmacists appears to be well established. A recent analysis gave the total number of pharmacies registered as being 58,000, of which 4,000-6,000 are chain stores and primarily commercial; 49,000 are classed as suburban or small-town drug stores; and the remaining 5,000 are "key" pharmacies, which have built up businesses based on the practice of pharmacy as a profession. Some are stated to handle up to six hundred prescriptions daily.



WINDOW DISPLAYS AT ANOTHER DALLAS DRUG STORE—Left, Cigarettes. Right, Tooth powder, with alarm clocks, garters, pot cleaners, etc.



# Trade Report

Where possible scales of prices of chemicals are given for bulk down to small quantities. Prices recorded for crude drugs, essential and fixed oils and coal tar products are for fair sized wholesale quantities. Qualities of chemicals, drugs, essential and fixed oils, etc., vary, and selected brands or grades would be at higher values

## 28 Essex Street, W.C.2, January 12

WHILE a rather quiet tone prevails in most markets, there has been more inquiry and a little more business during the past week. The general tone continues quite steady, and earlier in the week it seemed that the many products affected by exchange movements would have to be advanced on account of the further decline in sterling. With the recovery and steadier exchange rates now recorded, further increases in such items as QUININE SALTS are not necessary. ACID PYROGALLIC, which was reported sharply dearer last week, continues firm, and this week TANNIC ACID, B.P. levis, is reported firmer and likely to advance further. METHYLATED SPIRITS are steady at the recent reduction.

### Crude Drugs

There has been more inquiry from the consuming trade this week, but a further improvement is required to make the markets really good. The feature of this market is the very steady tone in most commodities, due chiefly to the comparatively limited supplies available here. Full prices are being paid for the remaining spot stocks of AGAR. CURAÇAO ALOES continue very firm on spot, with available supplies in strong hands; there are no shipment offers. The spot value for Canada BALSAM is quoted dearer. The call for bales of BRUCHU has been negligible; conditions in this market are not good. All descriptions of CARDAMOMS, on spot and for shipment, are firm at the recent advances. Fair amount of small spot business in CASCARA SAGRADA. Bergen continues to report business slow in Norwegian COD-LIVER OIL. DAMIANA LEAVES are slightly cheaper on spot. All descriptions of ERGOT have been neglected and, as quoted, the market is by no means steady. Sudan Gum ACACIA is steady. A little more inquiry is recorded for HONEY. Still not much business of any size in MATTO GROSSO IPECACUANHA. Japanese MENTHOL has not been in much request from consumers; market is steady and shipment quotations are maintained. Satisfactory business in OPIUM continues. The very moderate spot supplies of RHUBARB are being cleared and there are no shipment offers of any descriptions. RUBBER shows a slight loss on the week. SENEGA continues to be quoted at high figures; business negligible. Rather more inquiry for SENNA, and it is noted the manufacturing quality of TINNEVELLY pods are short and quoted rather dearer. No supplies of new crop ALEXANDRIAN hand-picked pods yet to hand. A better inquiry for TRAGACANTH. CARNAUBA WAXES are quoted rather easier.

### Essential Oils

Business has been a little better this week in these products, but the aggregate seems still to be well below normal. There are one or two bright features, but in most instances competition continues keen. Holders of ANISE (STAR) still report little demand, although their prices are cheap. Owing to lack of bulk supplies, the spot value for Japanese white CAMPHOR is now nominal; small lots are mentioned at a very high figure; there are no shipment offers. Java CITRONELLA continues cheap for shipment. Australian EUCALYPTUS is dearer. Shipment quotations for new crop Sicilian hand-pressed LEMON show a further appreciation and the source reports steadier conditions. A much firmer tone is noted in French Guinea ORANGE, and shipment offers of new crop are restricted owing, it is stated, to crop shortage. A fair consuming demand for Japanese PEPPERMINT, with the shipment market steady.

### Exchange Rates on London

The following is a list of the chief Continental and other exchange rates at the opening on Thursday morning:—

Centre	Quoted	Par	January 5	January 12
Amsterdam ...	Fls. to £	12·107	8·52	8·58
Berlin ...	Mks. to £	20·43	11·53	11·64
Brussels ...	Belgas to £	nominal	27·45	27·65
Copenhagen ...	Kr. to £	18·159	22·40	22·40
Lisbon ...	Esc. to £	110	110	110
Madrid ...	Ptas. to £	25·24½	nominal	nominal
Milan ...	Lire to £	92·46	88	88½
Montreal ...	Dols. to £	4·86½	4·67	4·71
New York ...	Dols. to £	nominal	4·63½	4·67
Oslo ...	Kr. to £	18·159	19·90	19·90
Paris ...	Fr. to £	124·21	176½	177
Prague ...	Kr. to £	164·25	135½	136
Stockholm ...	Kr. to £	18·150	19·40	19·40
Warsaw ...	Zloty to £	43·38	24½	24½
Zurich ...	Frs. to £	25·2115	20·50	20·66

Bank rate 2 per cent.

### Pharmaceutical Chemicals, etc.

CONDITIONS in this market continue on the quiet side. Including the recent revisions, quotations are generally steady.

ASPIRIN (TABLETS).—The agreed scale of prices for bulk quantities continues steady at the recent reductions: Under 5,000, 2s. 10d. per 1,000 tablets; 5,000, 2s. 8d.; 10,000, 2s. 7d.; 25,000, 2s. 5d.; 50,000, 2s. 4d.; 100,000, 2s. 3d.; 250,000, 2s. 2½d.; 500,000, 2s. 2d.; 1,000,000, 2s. 1d. per 1,000 tablets. Wholesale distributors' prices for small quantities would be at higher figures.

BARBITONE.—Business remains quiet: spot, two cwt., 8s. 11d.; 56 lb., 9s. 2d.; less than 56 lb., 9s. 5d. per lb.

BENZOIC ACID (B.P.).—Limited amount of business: five cwt., 1s. 7½d.; one cwt., 1s. 8d.; smaller parcels, from 1s. 9d. to 2s. 2d. per lb., ex store, as to quantity.

BROMIDES.—Makers' scales of prices steady. POTASSIUM, B.P., five cwt., 1s. 8d.; one cwt., 1s. 9d.; 28 lb., 2s. per lb. SODIUM, B.P., five cwt., 1s. 10d.; one cwt., 1s. 11d.; 28 lb., 2s. 2d. per lb. AMMONIUM, B.P., five cwt., 1s. 11d.; one cwt., 2s.; 28 lb., 2s. 3d. per lb. net. Resale clause applies. 28-lb. parcels and one-cwt. cases free. Smaller quantities than 28 lb. at higher prices. Export quotations are maintained as follows: POTASSIUM, B.P., five cwt., 1s. 4d.; one cwt., 1s. 4½d. SODIUM, B.P., five cwt., 1s. 5d.; one cwt., 1s. 5½d. AMMONIUM, B.P., five cwt., 1s. 6½d.; one cwt., 1s. 7d. per lb., f.o.b.

CITRIC ACID (B.P. CRYSTALS).—Market is quiet: British material quoted at 1s. 0½d. per lb., less 5 per cent. discount, nominal and without engagement. Dealers' prices for imported material are competitive.

CREAM OF TARTAR.—Continues steady: British material, 99 to 100 per cent., 92s. per cwt., less 2½ per cent. discount. Dealers' prices for foreign material competitive.

CREOSOTE (B.P.).—Remains dull: bulk quantities, in 25-kilo demijohns, 1s. 6d.; small parcels, 1s. 7½d. up to 2s. per lb., ex store.

EPHEDRINE.—Quotations for the chief salt continue very steady: Hydrochloride, B.P., quoted at about 6s. per oz. for minimum 1,000-oz. lots; small quantities, up to 7s. Pure alkaloid is quoted from 7s. 9d. to 8s. 3d. per oz., as to quantity.

GALLIC ACID.—Market is fully steady, quiet: spot, one cwt., 3s.; 56 lb., 3s. 1d.; smaller parcels, up to 3s. 6d. per lb.

LACTIC ACID (B.P.).—Spot quotations are steady: quantities, in carboys, 1s. 4½d. to 1s. 5d.; in winchesters and bottles, 1s. 6d. up to 2s. per lb., as to quantity.

METHYLATED SPIRITS.—Prices for all grades of industrial and pyridinised spirits reduced one penny per gallon, as from January 1. These prices will remain in force up to June 30, 1939:—

In One Delivery	Industrial Spirits				
	61 o.p.	64 o.p.	66 o.p.	68 o.p.	74 o.p.
500 galls. and upwards	1s. 3d. ...	1s. 4d. ...	1s. 5d. ...	1s. 6d. ...	1s. 8d.
100 " and under 500	1s. 5d. ...	1s. 6d. ...	1s. 7d. ...	1s. 8d. ...	1s. 10d.
30 " " " 100	1s. 7d. ...	1s. 8d. ...	1s. 9d. ...	1s. 10d. ...	1s. 12d.
10 " " " 30	1s. 9d. ...	1s. 10d. ...	1s. 11d. ...	1s. 12d. ...	1s. 14d.

In One Delivery	Pyridinised	Mineralised (Coloured Violet)
	61 o.p.	64 o.p.
500 galls. and upwards	1s. 5d. ...	1s. 6d. ...
100 " and under 500	1s. 7d. ...	1s. 8d. ...
30 " " " 100	1s. 9d. ...	1s. 10d. ...
10 " " " 30	1s. 11d. ...	1s. 12d. ...

Industrial methylated spirits (toilet quality) 2d. per gallon above the prices quoted for industrial methylated spirits. Delivered free. Carriage also paid on returned empty packages. Terms, cash in one month, less 2½ per cent.

METHYL SALICYLATE.—Fair spot business, values unchanged: spot, ten cwt., 1s. 1½d.; five cwt., 1s. 2d.; one cwt., 1s. 2½d.; less than one cwt., 1s. 3d.; smaller quantities, in bottles, up to 2s. per lb.

PHENACETIN.—Home makers' prices steady: crystals or powder, bulk quantities, from 2s. 6d.; smaller parcels, 2s. 7d. up to 3s. per lb., as to quantity.

PHENAZONE.—Dealers report business quiet: crystals, five cwt., 6s. 9½d.; two cwt., 7s.; one cwt., 7s. 3d.; and less, up to 7s. 6d. per lb., with powder 2½d. per lb., extra.



**PHOTOGRAPHIC CHEMICALS.**—Home makers' prices are as follows: **AMIDOL**.—28 lb., 8s.; 14 lb., 8s. 9d.; 7 lb., 9s. 6d., in free 7-lb. tins; under 7 lb., 12s. per lb., in free 1-lb. bottles. **CHLORQUINOL**.—1-lb. bottles, 21s. per lb. **GLYCIN**.—7 lb., 10s. 6d.; 1-lb. bottles, 13s. 6d. per lb. **HYDROQUINONE**.—56 lb., 4s. 10½d.; 28 lb., 5s.; 14 lb., 5s. 3d.; 7 lb., 5s. 6d.; in 1-lb. bottles, 6s. 6d. per lb. **METOL**.—28 lb., 9s. 6d.; 14 lb., 9s. 9d.; 7 lb., 10s. 6d., tins free; 3 lb., 12s., bottles free; 1-lb. bottles, 12s. 6d. per lb., bottles free. **ALUM (PHOTOGRAPHIC QUALITY)**.—1 cwt., 21s. per cwt.; 28 lb. for 6s. **GOLD CHLORIDE**.—15-grain tubes, 45s. per doz. **MAGNESIUM POWDER**.—10s. per lb. **PARAMIDOPHENOL HYDROCHLOR.**—8s. 6d. per lb., bottles free. **POTASSIUM FERRICYANIDE**.—14 lb., 2s. 2d.; 7 lb., 2s. 4d.; 1 lb., 2s. 6d. per lb. **POTASSIUM METABISULPHITE**.—One cwt., 8d.; 28 lb., 9d.; 14 lb., 10d.; 7 lb., 1s. per lb. **PYROGALLIC ACID, CRYST.**—One cwt., 7s. 9d.; 56 lb., 8s.; 28 lb., 8s. 3d. net; 14 lb., 9s.; 7 lb., 9s. 9d.; less than 7 lb., 10s. 3d. per lb., less 2½ per cent., monthly account. Resale in small packages: 1-oz. bottles, 2s.; 4-oz., 5s. 3d.; 8-oz., 9s.; 16-oz. bottles, 16s. 1½d. each, less 33½ per cent. to the trade. **RESUBLINED: 1-oz. bottles, 2s. 6d.; 4-oz., 6s. 6d.; 8-oz., 11s. 3d.; 16-oz. bottles, 20s. 3d. each, less 33½ per cent. to the trade. SODIUM (CARBONATE RECRYST.)**.—5 cwt., 12s. 6d. per cwt.; 1 cwt., 15s. 6d. per cwt.; 56 lb. for 11s. 6d.; 28 lb. for 6s. **SODIUM HYPOSULPHITE, CUBES, CRYST.**—5 cwt., 17s.; 1 cwt., 19s. 6d. per cwt.; 56 lb. for 11s. 6d.; 28 lb. for 6s. **SODIUM SULPHITE (PURE)**.—7 lb., 1s. 9d.; 1 lb., 2s. per lb., bottles and jars free. **SODIUM SULPHIDE, RECRYST.**—One cwt., 21s. 6d. per cwt.; 56 lb. for 13s. 6d.; 28 lb. for 7s.

**QUININE SALTS.**—Convention prices continue steady: Sulphate, 2s. 3d.; bisulphate, 2s. 3d.; ethyl carbonate, 2s. 11d.; salicylate, 2s. 11½d.; hydrochloride, 2s. 10d.; dihydrochloride, 3s. 1½d.; hydrobromide, 2s. 10d.; dihydrobromide, 3s. 1½d.; valerianate, 3s. 9½d.; phosphate, 3s. 5½d.; hydrophosphate, 4s. 1½d.; alkaloid, 3s. 1½d. per oz., 100-oz. tins free, carriage paid on bulk quantities.

**SALICYLIC ACID (B.P.).**—Makers' prices are steady: five cwt., 1s. 7d.; one cwt., 1s. 7½d.; 28 lb., 1s. 10d.; 14 lb., 1s. 11d.; 7 lb., 2s. 0½d.; 4 lb., 2s. 2½d. per lb.

**SALOL.**—Market continues competitive for bulk quantities: 2s. 2d. to 2s. 4d. per lb., as to quantity.

**SANTONIN.**—Market is neglected: bulk quantities, £10 5s.; and small parcels, up to about £12 10s. per kilogram.

**SODIUM BENZOATE (B.P.).**—Average business, market steady: five cwt., 1s. 3½d.; one cwt., 1s. 4d.; smaller parcels, from 1s. 5d. to 2s. per lb., as to quantity.

**SODIUM DIETHYLBARBITURATE.**—Business on small scale: spot, one cwt., 11s.; 28 lb., 11s. 3d.; 14 lb., 11s. 6d.; 7 lb., 11s. 9d.; smaller parcels, up to 12s. 3d. per lb.

**SODIUM SALICYLATE (B.P.).**—Makers' scales of prices are steady: home trade, crystals or powder, five cwt., 1s. 5½d.; one cwt., 1s. 6d.; 28 lb., 1s. 9d.; 14 lb., 1s. 10½d.; 7 lb., 1s. 11½d.; 1 lb., 2s. 4d. per lb.

**SULPHONAL.**—Dull and irregular: crystals or powder, two cwt., 15s. 5½d.; one cwt., 15s. 10½d.; 56 lb., 16s. 1d.; smaller parcels, up to 16s. 7½d. per lb.

**TANNIC ACID (B.P. LEVISS).**—Market is firm and quoted dearer at about 2s. 10d. to 3s. per lb., as to quantity.

**TARTARIC ACID (B.P. CRYSTALS).**—Quoted unchanged: British makers quote at 1s. 1½d. per lb. less 5 per cent. discount, dealers offering foreign materials at competitive prices.

**TERPINEOL.**—Convention prices continue at the reduction recently noted: ten cwt., 1s. 2d.; five cwt., 1s. 2½d.; one cwt., 1s. 3d.; smaller quantities, up to 1s. 6d. per lb.

### Crude Drugs, etc.

**AGAR.**—Steady demand for spot goods at full prices; shipment quotations are well maintained: spot, Kobe, No. 1, 3s. 9d.; No. 2, 3s. 6d.; Yokohama, No. 1, 3s. 5d. per lb.; shipment, new crop, January-February, Kobe, No. 1, 3s. 5d. to 3s. 6d., as to shipper; February-March, Kobe, No. 1, 3s. 4½d.; Kobe, No. 2, 3s. 3d.; Yokohama, No. 1, 3s. 1d. per lb., c.i.f.

**ALOES.**—Curaçao, except for one large parcel, which is firmly held for 180s., is scarce on spot; no shipment offers. Cape description remains dull. Cape, spot, in boxes, 47s. 6d.; shipment, 43s. per cwt., c.i.f. Curaçao, spot, 180s., up to 190s. for livery.

**ANTIMONY.**—Quoted unchanged, quiet: Chinese, crude, spot, £37; shipment, January-February, £30, c.i.f.; English regulus, £71 per ton, ex store.

**BALSAMS.**—Canada is rather dearer: *Tolu*, 1s. 9d.; *Canada*, 3s. 1½d.; shipment, 2s. 10½d., c.i.f.; *Copaiba*, 1s. 8d.; *Peru*, 4s. per lb., spot.

**BUCHU.**—Market has been very quiet, quoted unchanged: rounds, 1s. 3d. to 1s. 5d.; ovals, 1s. 2d. to 1s. 3d. per lb., as to quality and quantity; shipment, old crop, 1s. 2d., c.i.f. The only offers of new crop have been for February-March shipment, with 1s. 4d. per lb., c.i.f., asked, but a bid at slightly less would be considered.

**CAMPHOR.**—Routine spot business, values unchanged: Japanese monopoly BB brand, £7 10s. per 100 lb.; Japanese, natural, spot, tablets, 2s. 6d.; powder, 2s. 3d.; slabs, 2s. 2½d. per lb., ex store; shipment, tablets, 2s. 2d.; powder, 1s. 10½d.; slabs, 1s. 10½d. per lb., c.i.f. English refined flowers, one cwt., 3s. 1d.; 28 lb., 3s. 2d.;

small lots, 3s. 3d. per lb. Transparent tablets, 4 oz., 8 oz. and 16 oz., 3s. 4d.; 1 oz. and 2 oz., 3s. 5d.; ½ oz., ¾ oz. and 1 oz., 3s. 6d.

**CANTHARIDES.**—Market is quiet: Russian, 4s. 3d. to 4s. 6d.; Chinese, spot, about 2s. per lb., as to quantity.

**CARDAMOMS.**—Prices for all descriptions, spot and forward, are fully steady at recent advances: shipment, Aleppy greens, f.a.q. the season, 2s. 6d., c.i.f.; Aleppy seed, 3s. 8d. to 3s. 9d., c.i.f.; Mangalore seed, 3s. 4d., c.i.f.; Mangalore, partly bleached A, 3s. 1d. per lb., c.i.f.; spot, Aleppy seed, 4s.; Mangalore seed, 4s. per lb., ex store. Bleached descriptions on spot have been advanced 3d. to 6d. per lb.

**CASCARA SAGRADA.**—A fair amount of small orders on spot are reported, values steady: spot, 1938 bark, 52s. 6d.; 1937 bark, 57s. 6d.; 1936 bark, up to 65s. per cwt., ex store, duty paid. No shipment offers from the source.

**CLOVES.**—Market continues steady: Zanzibar, spot, 8½d.; shipment, January-February, 8d. per lb., c.i.f. Madagascar, in bond, 8d.; shipment, February-March, 6½d. per lb., c.i.f.

The landings of Zanzibar in London during the week ended January 7, were *nil*, and the deliveries 11, leaving a stock of 307. From January 1 to date the landings of Zanzibar have been *nil* and the deliveries 11. Landings of Madagascar for the week ended January 7, were *nil*, and the deliveries 11, leaving a stock of 443.

**COCOA BUTTER.**—Market is steady: prime English, 9d. to 10d. per lb.; foreign, 8d. to 9½d. per lb., as to quantity and quality.

**COCONUT (DESICCATED).**—Steady at the recent better quotations: spot, fine, 17s.; medium, 17s. 6d. per cwt.; shipment, halves, January, 16s. 9d. per cwt., c.i.f.

**COD-LIVER OIL.**—Bergen reports the shipment market is dull and quoted about unchanged: finest Lofoten steam-refined non-freezing medicinal oil, 85s. per barrel, c.i.f. London. Small lots, on spot, about 130s. per barrel, ex store, duty paid. British finest medicinal oil, 115s. per 25-gallon drum, delivered U.K., with rebates for 25 or more drums.

**DAMIANA LEAVES.**—Dealers are offering spot supplies in the region of 8d. per lb., as to quantity.

**ERGOT.**—This market has again been very slack and values on spot are easy as quoted: Spanish, old crop, 4s. 1d.; Portuguese, spot, about 4s. 1½d. to 4s. 3d.; shipment, about 3s. 10d., c.i.f. Polish, spot, about 3s. 8d. per lb., as to seller and quantity. No Russian available.

**GENTIAN.**—Occasional small spot demand: good clean French root, 31s. to 32s. per cwt. Other Continental, 29s. to 30s. per cwt., as to quantity.

**GINGER.**—West African remains in quiet demand: West African, spot, 22s. 6d.; for arrival, 19s. per cwt., c.i.f. Jamaican, spot, bold, in barrels, 65s. to 75s.; medium, bold, in bags, 47s.; small grinding, in bags, 40s. to 42s. 6d. per cwt., c.i.f.

**GUM ACACIA.**—Steady with a limited inquiry reported: Kordofan, cleaned sorts, spot, 39s.; shipment, 36s. 6d. per cwt., c.i.f.

**HENNA.**—Dealers report business quiet: Egyptian, brown, 30s.; green, 35s. per cwt., c.i.f.

**HONEY.**—A little more inquiry noted this week, with all descriptions quoted unchanged: Jamaican, dark, manufacturing, 29s. up to 40s. for pale set. Canadian, new crop, steady at 42s. 6d. to 45s., as to quality. Californian, white clover, 47s. 6d. per cwt., duty paid. Small lots of all descriptions at higher prices.

**HYDRASTIS.**—The demand for this product has been slow: U.S.P., spot, 12s. 10½d. to 13s.; shipment, about 12s. 7½d. per lb., c.i.f.

**IPECACUANHA.**—A small inquiry only noted, values about steady: Matto Grosso, B.P., spot, 6s. 10½d.; shipment, 6s. 9d. per lb., c.i.f. A parcel of Carthage is available on spot at about 5s. per lb.

**MENTHOL.**—The Japanese product has not met with much demand. K/S brands, spot, 13s.; near afloat parcels, 11s. 6d., c.i.f. Japanese shippers quote January-February, 10s. 10½d. to 11s., c.i.f., and have refused bids of 10s. 6d. Chinese, spot, 12s. 3d.; shipment, February-March, 10s. per lb., c.i.f.

**MERCURY.**—The shipment quotation for Spanish-Italian metal is unchanged at 70 dollars per bottle, f.o.b. Continent; spot, £15 4s. per bottle, ex store.

**ORIUM.**—Business continues on a fair scale at full prices: Turkish, 13 per cent., 1s. 2d.; Iranian, 12 per cent., 1s. 1d. per unit, landed and duty paid.

**PEPPER.**—Business quiet, values about level on the week: Lampung, in bond, 2½d.; shipment, January-March, 2½d.; March-May, 2½d., c.i.f. Tellicherry, spot, 4d.; shipment, January-March, 3s., c.i.f. Aleppy, spot, 4d.; shipment, January-March, 3s., c.i.f. White Muntok, in bond, 3½d.; shipment, January-March, 3½d.; March-May, 3½d., c.i.f. London Terminal Market: Black, January, 2½d.; March, 2½d.; May, 2½d.; July, 2½d. White, January, 3½d.; March, 3½d.; May, 3½d.; July, 3½d. per lb.

**PIMENTO.**—Quiet, values maintained: spot, 8d. per lb.; shipment, January-February, 6s. per cwt., c.i.f.

**RHUBARB.**—Firm on spot, with supplies running very low. No shipment offers of any descriptions: spot, rough round, up to 2s. 2d., as to seller and quantity. Shensi, 5s. per lb., ex store.



**RUBBER.**—Market has been rather dull and is quoted easier on the week: standard ribbed smoked sheet, spot, 8½d.; January, 8½d.; February, 8½d.; March, 8½d.; April-June, 8½d.; July-September, 8½d.

**SAFFRON.**—The small London stocks of genuine Valencia of finest quality are held firm at 90s. to 92s. 6d. per lb.

**SEEDS.**—ANISE.—Spot, duty paid, Spanish, 57s. 6d.; Bulgarian, 43s.; Russian, 42s.; Syrian, 41s. CANARY.—Market firm; prices quoted are spot, duty paid: Mazagan, 15s. 9d.; Morocco, 15s.; Turkish, 13s. 9d.; Plate, 14s.; Spanish, 25s. to 37s. 6d. CARAWAY.—Dutch, spot, 32s. 9d., duty paid; 27s. 6d. quoted f.o.b. Holland. CORIANDER.—Morocco, spot, 17s. 6d., duty paid; 16s., in bond. The shipment price is 15s. 3d., c.i.f. CUMIN.—Spot, Malta, 45s., duty free; Morocco, 46s. 6d., duty paid, and for shipment, 43s. 9d., c.i.f. FENNEL.—Indian, spot, 21s. to 22s. 6d. FENUGREEK.—Morocco, spot, 13s., duty paid. MUSTARD.—English, 21s. to 29s. 6d., according to quality.

**SENEGA.**—Spot quotations are being maintained at 2s. 10d. per lb. No shipment offers.

**SENNA.**—Inquiry has been rather better: Tinnevely leaves, good green quality, in short supply: spot, No. 1, 6½d.; No. 2, 4d.; No. 3, 2½d.; No. 4, 2½d., and slightly less for old crop leaves. Tinnevely pods, good greenish hand-picked offer at 5d. to 6d., with dark grades at 3½d. to 4d. Manufacturing qualities scarce and dearer at 2½d. per lb. Alexandrian hand-picked pods: no supplies of new crop yet to hand: medium to good, No. 1, 3s. 6d.; No. 2, 2s. 6d.; No. 3, 2s., with inferior grades from 1s. to 1s. 9d. per lb., ex store.

**SHELLAC.**—Market continues steady, business quiet: spot, standard TN orange, 39s. to 42s.; fine orange, 52s. 6d. to 80s.; pure button, 47s. 6d. to 50s. per cwt. For delivery, TN, March, 39s. 6d.; May, 40s. For arrival, TN, January-February, 38s. per cwt., c.i.f.

**TRAGACANTH.**—Most grades of gum have received a better inquiry this week and are quoted unchanged: finest selected, white ribbon, £60; No. 1, white, £55 to £57 10s.; No. 2, white, £50 to £53; No. 3, white, £35 to £42 10s.; amber leaf, £32; cleaned amber sorts, £16; brown to amber leaf, £11 10s.; red leaf, £9 to £10; hoggy, £6 to £7 per cwt., ex store.

**TURMERIC.**—One or two parcels of "polished" Madras finger reported available here at about 32s. 6d. per cwt.; shipment, prompt, 28s. 3d. per cwt., c.i.f.; new crop, April-May, 26s. per cwt., c.i.f.

**WAXES.**—BEES'.—Spot supplies are moderate and shipment offers tend to be restricted: Dar-es-Salaam, spot, 100s.; shipment, 95s., c.i.f. Benguela, 90s., in bond; shipment, 85s., c.i.f. Conakry, 90s., in bond; shipment, 84s., c.i.f. CARNAUBA.—Fatty grey, spot, 147s. 6d.; afloat, 139s.; shipment, January-February, 138s., c.i.f. Chalky grey, spot, 145s.; shipment, January-February, 135s. 6d., c.i.f. Primeira, spot, good quality, 185s.; shipment, January-February, 180s.; Mediana, spot, 180s.; shipment, 177s. 6d. per cwt., c.i.f. Small business reported, with the market steady as now quoted.

### Essential and Expressed Oils, etc.

RATHER more general inquiry reported for spot supplies, with the general tone steady. Sicilian lemon is much steadier.

**ANISE (STAR).**—There is still but little buying of spot goods, and holders seem willing to consider bids near their prices: spot, leads, nominal; tins, 3s. 4d. to 3s. 4½d.; drums, 3s. 3d. per lb., ex store; no firm shipment offers.

**BERGAMOT.**—Due, it is stated, to sterling weakness and the firm position at the source, the Consortium shipment price is firm for new crop oil at about 15s. per lb., c.i.f. Genuine oil, in small lots, on spot, about 15s. 6d. per lb., with blended oils at cheaper prices.

**BOIS DE ROSE.**—Values are about maintained, business quiet: drums, 5s. 9d., with similar quantities, re-packed, up to 6s. 3d. per lb., ex store; shipment, 5s. 6d., c.i.f., minimum three drums.

**CAJUPUT.**—Limited amount of spot business: B.P., 1s. 11d. to 2s. 4d. per lb., as to quantity, spot.

**CAMPOR.**—Very firm, with values of white oil nominal owing to scarcity of spot supplies; Japanese, 180s. per cwt., in small parcels. No Chinese oil available.

**CANANGA.**—Market remains dull and competitive: spot, 4s. 7½d. to 4s. 9d. per lb., according to quantity and packing; shipment about 4s. 1½d. per lb., c.i.f.

Exports from Java in November, 1938, amounted to 794 kilog., compared with 2,764 kilog. in November, 1937, and 933 kilog. in 1936. Shipments during January-November, 1938, totalled 13,541 kilog., compared with 19,988 kilog. in the corresponding months of 1937, and 16,319 kilog. in 1936.

**CARAWAY.**—Steady, with average small spot demands: Dutch rectified, 7s. 3d. to 7s. 9d.; crude, 6s. 9d. to 7s. 3d. per lb., as to quantity, landed and duty paid. Some shipment offers of Russian are reported.

**CASSIA.**—The spot demand for this product shows no sign of improvement. Sellers of leads at about 3s. 4½d. and drums at 3s. 3d.

**CASTOR.**—Values are level on the week, with pharmaceutical quality at 39s. 6d. per cwt., in barrels, ex store, London. Hull, 2s. per cwt. less. Small quantities, packed in cases, 4s. 6d. per cwt. extra.

**CEDARWOOD.**—Fair business, market steady: African, in drums, 11½d.; smaller packages, up to 1s. 4d. per lb. American, in drums, 1s.; smaller packages, up to 1s. 4d. per lb.

**CINNAMON LEAF.**—Small quantities in fair demand on spot: the Ceylon oil, re-packed in limited quantities, about 2s. 6d. to 2s. 9d. per lb., as to quantity.

**CITRONELLA.**—Business in both oils seems to have been slow. Java continues to be quoted very cheaply forward: Ceylon, spot, drums, from 1s. 6½d.; smaller parcels, up to 1s. 11d.; shipment, drums, about 1s. 4½d. per lb., c.i.f. Java, spot, drums, about 1s. 7½d.; smaller parcels, up to 2s.; shipment, drums, around 1s. 1½d. per lb., c.i.f.

Exports from Java during November, 1938, totalled 190,696 kilog., compared with 144,787 kilog. in November, 1937, and 108,291 kilog. in 1936. Shipments for the eleven months, January-November, 1938, totalled 1,691,173 kilog., compared with 1,266,978 kilog. in the corresponding period of 1937, and 1,463,395 kilog. in 1936.

**CLOVE.**—Spot business in limited quantities at former prices: Madagascar, spot, drums, 2s. 8d. per lb., if available; smaller parcels, up to 3s. 3d. English distilled, 4s. 6d. to 4s. 9d. per lb., ex store.

**COCONUT.**—English deodorised is quoted unchanged at £24 10s. per ton, in barrels, ex works.

**EUCALYPTUS.**—Spot and shipment prices for branded oils are quoted dearer: Australian, 70 to 75 per cent., tins, 1s. 3d. to 1s. 3½d.; drums, 1s. 2½d. to 1s. 2½d.; 80 to 85 per cent., drums, 1s. 6d. per lb., ex store, with higher prices for small lots; shipment, 70 to 75 per cent., tins, 1s. 2½d.; drums, 1s. 2d.; 80 to 85 per cent., 1s. 4½d. per lb., c.i.f.

**GINGERGRASS.**—A small parcel of oil is available here, quoted at 7s. 3d. to 7s. 4½d. per lb., ex store.

**GRAPEFRUIT.**—Market is slack: Californian, 10s. 3d. to 12s. Florida, 11s. to 12s. 6d. per lb., ex store, as to quantity.

According to a report in "World Trade Notes" Department of Commerce, Washington, Southern States producers estimate it would be possible to produce 500,000 lb. of grapefruit oil annually.

**HO (SHIU).**—Very limited supplies here; quotations firm: spot, "improved" quality, 4s. 9d.; "extra," 5s. per lb., ex store.

**LEMON.**—The improvement in the shipment market noted last week is well sustained, and quotations for new crop oil for shipment now range from 10s. 3d. to 10s. 6d. per lb., c.i.f., as to brand and quantity. Reports indicate that quite a fair business has been done at rather lower values. Spot values depend on the quality of the oil. Californian distilled in limited supply on spot at 1 dollar 54 cents per lb. Californian cold-pressed, 9s. per lb., landed.

**LEMONGRASS.**—Market is practically idle: spot, 1s. 7d. to 1s. 10½d. per lb., as to quantity and packing; shipment, 1s. 4½d. per lb., c.i.f.

**LIME.**—Market is quiet, quotations unsteady: West Indian distilled is in the region of 17s. 6d. per lb.

**LINSEED.**—Raw oil, in small quantities, 25s. 9d. per cwt.; boiled oil, 29s. per cwt., ex works.

**OLIVE.**—Fair business, with quotations steady at recent advances: B.P., 1 per cent., 6s. 1½d. to 6s. 3d. per gallon, in drums. Edible quality, ten 1-gallon tins, in cases, 84s.; twenty ½-gallon tins, in cases, 86s. per case; drums, 6s. 4½d. per gallon, ex store.

**ORANGE.**—Firm conditions are reported in the shipment market for French Guinea oil and offers of new crop oil, which is now reported to be short, are very restricted, with fully 2s. 2d. to 2s. 3d., c.i.f., indicated. Spot values are also better, and supplies of good oil are becoming limited; now about 2s. 9d. for drums and up to 3s. 2d. for small lots of re-packed oil. Californian, small drums, 59 cents; two or more cases, 61 cents per lb., ex store. Florida, cold-pressed, 85 cents per lb., in drums, landed, London.

**PALMAROSA.**—Quiet spot demand, market steady: spot, about 8s. per lb. for bulk purchases; shipment is steady at 7s. 3d. per lb., c.i.f. Java oil is available at about 4s. 3d. per lb., ex store.

**PATCHOULI.**—The quality of oil offered on spot: Singapore, spot, 10s. 4d. to 10s. 6d.; Seychelles, spot, about 9s.; Java oil, about 9s. 3d. per lb., ex store, for original packages.

**PEPPERMINT.**—The Japanese product has met with a fair demand from the trade and the market is steady. A number of October-December declarations are still outstanding: spot, 4s. 7½d. to 4s. 8d. Japanese shippers quote January-March, 4s. 4d. to 4s. 5d., as to shipper. Probable buyers of October-December at 4s. 2d. to 4s. 3d., c.i.f., with sellers at 4s. 5d., c.i.f. American natural oil continues steady at 2 dollars 30 cents to 2 dollars 35 cents per lb., c.i.f.

**SANDALWOOD.**—Genuine East Indian Mysore, in one-case lots, steady at 20s. 6d. per lb. East India, produced outside the province of Mysore, 18s. 6d. to 19s. per lb., c.i.f., in bulk quantities. English-made West Indian, 7s. 3d. per lb. Australian, steady at 15s. 3d. per lb., for 7-lb. tins; one case at 14s. 9d. and five cases at 14s. 6d. per lb.

**SPEARMINT.**—Market is quoted rather easier: U.S.P. oil, spot, about 9s. 3d. to 9s. 4½d.; shipment, 8s. per lb., c.i.f.

**SPIKE.**—Spot quotations for genuine fine quality Spanish oil continue steady on spot at about 5s. 3d. per lb., ex store.

**TURPENTINE (AMERICAN).**—London stocks on January 7 totalled 29,256 barrels; spot, London, 34s.; Hull, 35s.; Liverpool, 36s. per cwt. Market is steady at the advance.

**VETIVERT.**—Market has remained dull: Bourbon, about 15s. to 16s. 6d. per lb., and slightly less for drums, ex store.

Exports from Java during November, 1938, totalled 1,435 kilog., compared with 917 kilog. in November, 1937. Shipments during January-November, 1938, totalled 11,556 kilog., compared with 18,862 kilog. in the corresponding period of 1937.

**WORMSEED.**—Market is reported steadier at the source: U.S.P. oil, spot, 9s. 9d. to 10s.; shipment, 9s. 6d. per lb., c.i.f.



# Correspondence

Correspondents may adopt an assumed name, but must in all cases furnish their real name and address to the Editor

## Drug Stores as Branch Businesses

SIR,—As the proposer at the Liverpool Conference, on behalf of the Tees-side Branch of the Pharmaceutical Society, of the resolution which called for enforcement—without fear or favour—of Section 9 of the 1933 Pharmacy and Poisons Act, I note that the co-operative societies are endeavouring, by virtue of their present political strength, to have this particular section nullified or amended, purely in the interests of economic gain. Against this unjust and unfair attitude on the part of the co-operative societies, the Pharmaceutical Society, which is entrusted with an important part of the nation's laws, has a clear case; and it would appear that it is prepared to act vigorously. I would like to suggest that never before or since has the pharmacists' case for protection in the real interests of the public been so clearly expounded as it was by Professor Attfield at the 1883 Conference, and may be found in the 1883 Year Book. May I suggest that his address on that occasion be examined and distributed to members of Parliament, as I gather this was originally intended. So thorough and just was his exposition that the then Editor of "The Times" took up the position put forward by Professor Attfield, namely that the pharmacist had to undergo a certain education, etc., for the benefit of the State, and that the State did not provide a *quid pro quo*.—Yours faithfully,

R. MACDONALD MURRAY.

Middlesbrough.

SIR,—Pharmacists throughout the country—particularly those in retail business on their own account—must necessarily be perturbed by the report of the last meeting of the Pharmaceutical Society's Council concerning the situation which has arisen in connexion with the application of Sections 8, 9 and 10 of the Pharmacy and Poisons Act, 1933, to co-operative pharmacy (*C. & D.*, January 7, pp. 5 and 13). Since the Act came into effect the Society has been successful in legal actions which have been instituted under these sections, against the Society's own members, and with the High Court decision of the Hygienic Stores case it would appear that the principle involved has been completely established. Those who were present at the Liverpool Conference when this matter was debated will remember that it was stated that if a concrete case against a co-operative society was to be placed before the Law Committee it was thought that proceedings could be instituted. Will the Council say whether such a case has in fact been brought to their notice since the Liverpool Conference, and if so, what was its fate? By preventing pharmacists conducting drug stores as branches of their pharmacies, in a manner likely to mislead the public, these sections of the Act have afforded the public a very considerable measure of protection; and it would be well for all members of the Society to give immediate consideration to the possible results of any widening of the sections referred to. I cannot believe that any pharmacist or firm of multiple chemists would wish to prejudice in any way that public service of protection upon which we pride ourselves, but it must be fully realised that with a widening of Sections 8, 9 and 10 it would possibly become an economic necessity for both private pharmacists and company chemists to open branch drug stores in order to meet increased competition. This would certainly not be in the best public interest, and would considerably lower the prestige of the craft. Under circumstances which would permit chemists to own both forms of businesses at one and the same time, it is difficult to see how the Chemists' Friends scheme, in its present form, could continue to exist. Our Council has the responsibility of administration of the Act, and also the fundamental responsibility of "the protection of the business of chemist and druggist," and there can be no reason why one inch of ground which is ours by legal right of tenure should be given away. We therefore look to that august body to act in the best interests of all members of the Society by showing pluck and determination in making a solid stand against any amendment of the Act which would be detrimental to the welfare of the public and the Society alike.

Yours faithfully,

Mansfield.

J. SPAANDERMAN.

## Examinations in Photography

SIR,—The article on the above subject and the editorial on the same in your issue of January 7 stimulated me to look up an old syllabus of a class to which I taught photography about the year 1902. At that time—perhaps they do still—the Board of Education issued a list of subjects for evening extension classes to the various educational authorities. A copy of this came to a suburban district of St. Helens, and a majority of those who wished to take classes in the evening (being engaged with some trade in the daytime) selected photography. Being the first time this had been catalogued for a technical class, as the local dealer in photographic goods I was approached to teach it. I accepted the offer with considerable misgivings, for taking photographs and dealing in materials does not make a teacher of the subject, and to make matters worse, after accepting, I was asked to submit a copy of a syllabus of my lessons to cover the winter season, September to May, or really October to April. I made several inquiries at the time but no school had classes in pure photography, except Manchester, which somehow I did not write to, so I had to plan my own. The City and Guilds Institute of London conducted the examinations, but could not refer me to a school which taught it. Unfortunately, I could not get my students in the end to go in for the examination. It was very difficult to get them to make notes. They simply listened to the lectures. Photography as a business has changed vastly since that time. We do not now order a quarter of a ton of hypo or three dozen tubes of gold chloride and 7 lb. of ammonium sulphocyanide, but we do the D. & P. work, or in any case take it in and get some process people to do it. Nor are we bothered with a dozen brands of plates. Still, those old days were interesting and profitable. The new move of examinations, up to date, is a good one—so that the future dealer will know what he is talking about and give reliable advice on matters photographic.—Yours faithfully,

Liverpool.

J. G. WALLBRIDGE.

## Disallowed Insurance Articles

SIR,—The responsibility of deciding, in the first instance, whether any particular article or appliance should be allowed surely rests with the doctor. In the extreme case of a National Health Insurance prescription being issued for an iron lung, as quoted by "Panel Chemist" (*C. & D.*, January 7, p. 23), why should the Insurance Committee devote their attention to the chemist? It is the doctor who orders the appliance who should be tackled by the Insurance Committee. The letter of "Panel Chemist" exemplifies the readiness of the chemist to take the blame for anything and everything!

Yours faithfully,  
PRACTISING PHARMACIST (9/1).

## Mister and Miss

SIR,—Apropos of your contributor's remarks on the subject of errand boys (*C. & D.*, January 7, p. 3), during a lengthy experience of retail pharmacy I have found it not to be uncommon for the name by which the errand boys are called to remain constant, although its recipient may exchange personalities, sometimes frequently. It is more convenient to have a standardised name for the holder of the messenger's job, one familiar to all the staff without constant change, and the boys themselves soon recognise who is wanted when "John" or "James," as the case may be, is called for. There is the further distinction that other members of the firm from the apprentice upwards are invariably addressed by their surnames with the addition of "Mr." I have nothing to say against this, as apart from civility and politeness there must be a certain standing kept up if discipline is to be maintained, but when I was engaged in a wholesale firm I found that all the girls in the manufacturing and packing departments were called by their Christian names while those working in the office, including the office girls whose duties coincided approximately to the boy of the retail, were invariably addressed as "Miss So-and-so."

Yours faithfully,

SESQUIOXIDE (7/1).



### Shop Front Maintenance

SIR,—In the notes on "Shop Front Maintenance" (*C. & D.*, January 7, p. 17) there are two items which I do not see mentioned among the materials for which cleaning processes are given, namely, chromium plating and glazed tiles. Chromium plating is used for door handles, finger plates and letter boxes, and is supposed to be cleaned only with a damp cloth and polished with a dry one. This is not sufficient to keep it bright after a time or to remove rain spots, and I have tried a proprietary cleaner with not very satisfactory results. So far the best cleaning agent I have found is a liquid car polish, although I do not know if ultimately it might prove injurious to the chromium. For glazed tiles olive oil has been recommended to keep them bright, but it tends to leave a film which collects dust unless it is used so sparingly that it can be wiped dry, when it is hardly worth the trouble of using it. As an alternative I have tried a good wax floor polish, and this leaves the tiles bright if well polished with a soft cloth.

Yours faithfully,

POLISHER (8/1).

### Forty Years Ago

SIR,—I can only go back for forty out of the fifty years which Mr. H. Lucas describes in his article on "Fifty Years of Pharmaceutical Education" (*C. & D.*, January 7, p. 15), but although less money flowed into the till in those days, on the other hand there was much less to be paid out. Shops, which at that time were considered highly rented at £50 or £60 a year, now command nearly as many hundreds. Rates and taxes have increased in proportion, or rather one would say out of proportion, electric light and gas are much dearer, notices of a further rise in the price of both these have just come in, and coal costs over twice as much now as then. Apprentices used to pay a premium and received no wages, or at most a nominal amount for pocket money, as they mostly lived in with the other assistants, whose salaries were estimated on a scale adjusted to include the cost of their keep. The Proprietary Articles Trade Association was just getting into shape when I entered my apprenticeship, but there still remained the price cutting of patents, as indeed it does to-day after all these years, although it is now mostly confined to cut-price shops and market traders. The National Health Insurance Act was not thought of, and there were no clinics or welfare centres with their distribution of foods and other supplies. Although competition was keen in many ways, I do not think there were so many pharmacies in proportion to the population as there are now, neither do I think the unqualified holders of patent medicine licences outnumbered the pharmacists by seven to one.—Yours faithfully,

QUARANTA (8/1).

### In the News

SIR,—Glancing through the columns of last week's *C. & D.*, I am inclined to be reminiscent. I note, for instance, that Mr. Reid Douglas has just retired from the managing directorship of that fine old-established pharmaceutical concern Frazër & Green, Ltd., Glasgow. That brought back memories of a distinguished predecessor and former proprietor, W. R. Kinninmont, a remarkable pharmacist and one-time examiner. I can well recall his gentle and persuasive shepherding of me through part of my Minor examination at York Place. A man of culture and distinction, his name is perpetuated to pharmacy in the Kinninmont prize. A few pages further on I come across another notable retiral from active pharmaceutical practice. In the olden days I recall Herbert Skinner as a rebel against orthodoxy in pharmaceutical politics and one whose name was "mud" in official circles. But diligence, ability and persistence overcame the early ostracism and he was eventually received into the "inner circle." Since then he has run the whole gamut of official honours and is now retiring from actual practical pharmacy. I take it he will devote his days wholly to the tortuous paths of pharmaceutical politics. On the same page I recognise Mr. H. Lucas, whom I remember as a demonstrator at the Metropolitan College of Pharmacy when that incomparable teacher and genial friend Watson Will was principal. Those were the days when scientists of world-wide repute—Sir William Ramsay, Sir Joseph Swan, Dr. F. B. Power and such—were guests at Watson Will's annual school dinners and gave sound, but not too serious, counsel to student and visitor alike. Yet another personality is mentioned in connexion with the New Year Honours List. "Dick" Robinson—as we

knew him thirty years ago—was a pleasant and popular product of Bloomsbury Square, who won a Bell scholarship, and after qualifying engaged for a period in pharmaceutical journalism. His father (Sir Richard Robinson) owned one or two West End businesses, and was a president of the Pharmaceutical Society in the early nineteen hundreds. Sir Richard's *métier*, however, was public service, and he was chairman of the London County Council for some years. During his journalistic period young Richard studied for the Bar, and was called in due course. Subsequently he secured the appointment of chief officer of the Public Control Department on the Middlesex County Council, and his active association with pharmacy ended, although I believe he still keeps up interest in pharmaceutical affairs.—Yours truly,

SENECTACUS (10/1).

### Prescriptions and Proprieties

SIR,—While the Pharmaceutical Council is solemnly "considering" the code of ethics propounded by Tees-side, Eastbourne is apparently doing something practical. The rules of conduct adopted by members of the Eastbourne Association (*C. & D.*, December 24, p. 680) are extremely valuable and might with advantage be copied by chemists' associations all over the country. Price-coding of prescriptions to be binding on all members was suggested recently, if I remember rightly, by a member of the Thames Valley Association, who placed a well-thought-out scheme before his fellow members, but (unlike Eastbourne) it was not agreed to. Instead it was relegated, I think, to the Surrey County combined Association (or some such body) and has not been heard of since. Now that Eastbourne is the pioneer it is to be hoped that not only Surrey but all other counties will follow so excellent an example, for there is nothing more derogatory to the professional status of a chemist than the knowledge that the prescription for which one charges 2s. can be obtained for 1s. 3d. at a rival establishment not far away. Other sound rules adopted by Eastbourne deal with ambiguity in prescriptions and discouragement of discussion, with the patient, of the therapeutic effect of his medicine. I note with interest that C.F. and P.A.T.A. support were turned down as a "condition" of membership, but that the movements were recommended by the majority. Incidentally it would be illuminating to have categorical reasons for the downright statement of Mr. D. Roberts at Liverpool (*C. & D.*, December 24, p. 681) that "the P.A.T.A. was one of the biggest curses of to-day." Evidently the question of proprietary medicines loomed fairly largely in the Liverpool discussion, as it probably will at other meetings during the next month or two preceding the next fateful Budget.

Yours truly,

SOLON (2/1).

## Points from Letters

### An Informative Article

I am over forty years in business on my own, and have read with great interest and delight the article on "How I Opened a Branch" in the *C. & D.*, January, 7, p. 16. Almost every paragraph gives me some point of improvement in my own premises or methods of doing business. "Concentration" and solo window displays I have used for some time, and found effective, though the writer gives me more hints. The writer's "Developments" has given several new ideas of increasing and retaining my customers.—R. E. C. (7/1).

### Medicine Stamp Revenue

The tables published in the *C. & D.*, January 7, p. 14, make it clear that the Chancellor of the Exchequer is not likely to lessen the burden of proprietary medicine manufacturers. On the contrary, it seems rather likely that he is already looking round for some method of increasing the returns from this source of revenue. It is rather astonishing to note the steady increase in numbers during the past five years of no fewer than 24,000 makers and vendors of stamped medicines in the United Kingdom. They bring in a revenue of just on £41,000, an item not to be sneezed at, and this steady growth of the trade has gone on in spite of denunciations from medical men and interested Parliamentarians concerning the "pernicious traffic" in preparations which the public persist in buying in large quantities.—Zingiber (9/1).



## Miscellaneous Inquiries

We do not undertake to analyse and report upon proprietary articles nor to publish supposed formulas for them

**M. C. (12/12).—BOOKS ON FIRST AID.**—The following will be suitable for your requirements: Warwick & Tonstall's "First Aid to the Injured and Sick," Wright, Bristol, 5s.; First Aid to the Injured, St. John's Ambulance Association, 2s.; First Aid for Gas Casualties, H.M. Stationery Office, Kingsway, W.C.2, 4d.

**I. J. L. (12/12).—OPTICAL INSTRUCTION.**—The subject was dealt with extensively in the Educational Number of THE CHEMIST AND DRUGGIST, August 13, p. 176, in which you will find details of the various schools of optics.

**J. B. (9/12).—SKIN BALM.**—Although toilet articles are exempt from medicine-stamp duty, they can be rendered liable by the use of terms implying medicinal properties. The word "balm" has been officially declared to imply "a curative or remedial agent, possessing softening and soothing properties."

**W. B. S. (12/12).—SHAVING CREAM.**—As stated above, we do not undertake to publish alleged formulas of proprietary preparations. The following, however, is a representative formula for a brushless shaving cream, which will form the basis of experiment:—

Stearic acid .. .. .	20.0
Caustic potash .. .. .	2.0
Borax .. .. .	5.0
Spermaceti .. .. .	3.0
Glycerin .. .. .	10.0
Distilled water .. .. .	80.0

**E. J. E. (12/12).—FACTORY EYE DROPS No. 2.**—The formula for which you ask is as follows:—

Sodium bicarbonate .. .. .	15 gr.
Water .. .. .	1 oz.

This is used for neutralising acids which have been splashed on to the eye. The eyeball is brushed with the solution and then cocaine eye drops are used in a similar manner.

**J. F. (Texas) (28/38).—BOVINE MASTITIS.**—Recently there appeared a long report on the control of mastitis in New York State. The report emphasises the necessity of weeding out infective cases as in tuberculosis, and advises the use of strip cup (by which clots can be detected), and of bromthymol blue to detect acidity of the milk; early detection gives the best chances of success. Treatment in acute cases is directed to alleviating pain and lessening any febrile conditions, using potassium nitrate with one or two drachm doses of tincture of aconite; also hot fomentations of the udder, using a kaolin poultice or a lead and belladonna lotion. Later the treatment must depend on the amount of fibrosis and the character of the milk, but the best ointments are ung. althææ B.P.C.; lin. potass. iod. c. sapon.; and ung. iodi denigrescens. Bacteriological examination reveals streptococci and bacillus pyogenes in "diseased" milk, and a bovine mastitis vaccine is put on the market for the preventive and curative inoculation of heifers and cows.

**W. H. P. (11/1).—TESTING FOR TUBERCULOSIS IN CATTLE.**—The following publications give useful information: "Eradication of Bovine Tuberculosis" (Jordan, 1933); "Medical Research" (H.M. Stationery Office, Kingsway, London, W.C.2, price 2s.). The Medical Research Council Report 21094 describes the intradermic test, which is preferred at present.

**K. M. (30/38).—RED PALM OIL.**—This oil is obtained from the ripe fruits of the palm tree and has considerable use for nutritional purposes in tropical countries—where it is cheap—on account of its carotene content. The red colour and nutritional value of the oil depend on the amount of carotene present, and the pale oils supplied to the soap industry are poor in this substance.

**A. L. (2/1).—HARD TOE-NAIL.**—A preparation in use by chiropodists for softening a hard toe-nail consists of 5 per cent. solution of sodium sulphide, applied by means of a brush. The skin around the nail is first smeared with soft paraffin to prevent its being burnt by the solution. When the nail is softened, the soft portion is scraped away with a blunt knife, the process being repeated if necessary.

**S. M. P. (3/1).—ELECTRIC-CARDIAGRAPH JELLY.**—The following formula gives excellent results:—

Sod. chlorid. .. .. .	20 per cent.
Glycerin .. .. .	10 per cent.
P. tragac. .. .. .	gr. 8
Aq. .. .. .	ad fl. oz. 1

**H. T. (2/1).—MUCOUS COLITIS.**—According to some authorities, the best results are obtained with a generous mixed diet, with an increased proportion of vegetable foods, especially those which contain much cellulose and organic acids. Fresh or dried fruit should be taken three times a day, and green vegetable eaten at lunch and dinner. Stewed prunes taken at breakfast (the amount regulated according to the severity of the condition), are especially valuable, and wholemeal bread and porridge with cream are also useful. Care should be taken that sufficient fluid is drunk, and a glass of cold water taken on rising in the morning is often helpful. It is recommended that raw vegetables in salads and pickles, fibrous vegetables, such as celery, and the skins and pips of fruit should be excluded. Mustard, pepper and spices of all kinds should be avoided. Smoking should be restricted and in severe cases should be entirely abandoned.

**A. M. (6/1).—PIG POWDER.**—The following formula for a mineral mixture for pigs is taken from "Veterinary Counter Practice."

Sodium chloride .. .. .	10 lb.
Finely ground limestone .. .. .	10 lb.
Sterilised bone flour .. .. .	25 lb.
Sulphur .. .. .	2½ lb.
Sesquioxide of iron .. .. .	2½ lb.
Potassium iodide .. .. .	1½ oz.

Two or three pounds to be mixed with every hundredweight of meal fed.

**B. K. (9/1).—VALUE OF A BUSINESS.**—An approximate computation would be three years' net profits, *plus* the valuation of stock and fixtures, with possibly an addition for a renewable lease.

**W. R. W. (39/9).—LIQUID WATER-SOFTENER.**—The following formula for a softening essence will provide a basis for experiment:—

Tincture of quillaia .. .. .	½ oz.
Lanette wax .. .. .	½ drachm

Warm to dissolve, and mix with sufficient warm distilled water to produce 6 fl. oz. Colour with a solution of malachite green.

**H. J. (12/38) and D. E. (1/39).—HISTORY OF COSMETICS.**—Information such as was published in THE CHEMIST AND DRUGGIST articles on "Beauty Through the Ages" is not available in any book. In fact, articles of that nature are only compiled as the result of much research.

## Retrospect of Fifty Years Ago

Reprinted from

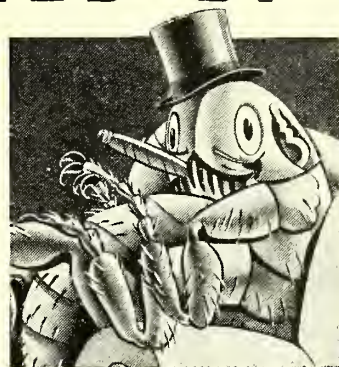
"The Chemist and Druggist," January 12, 1889

### Trade Report

**TEA.**—The market for China tea is firmer, the quantity offering in public sale being moderate, and lower grades both of Moning and Kaisow show ¼d. advance; Shantams are selling at 4½d. to 4¾d.; fair common Kaisow, 5d. to 6d., and fair common Moning about the same range. Panyongs from 7d. to 9d. show good value, and Pecco Congous selling in public sale from 8½d. to 9½d., though ¾d. to ½d. dearer than the lowest point touched just before Christmas, are still very cheap. Assams are in large supply, and lower grades are easier, useful broken and leaf teas selling at 7d. to 7½d., and Pekoes from 9d. to 1s. 1d. are well worth the attention of buyers. These sorts have probably never been cheaper, and a little more demand from the country will soon raise prices. Ceylons are steady at the decline for lower grades, and teas from 10d. to 1s. are capital value.



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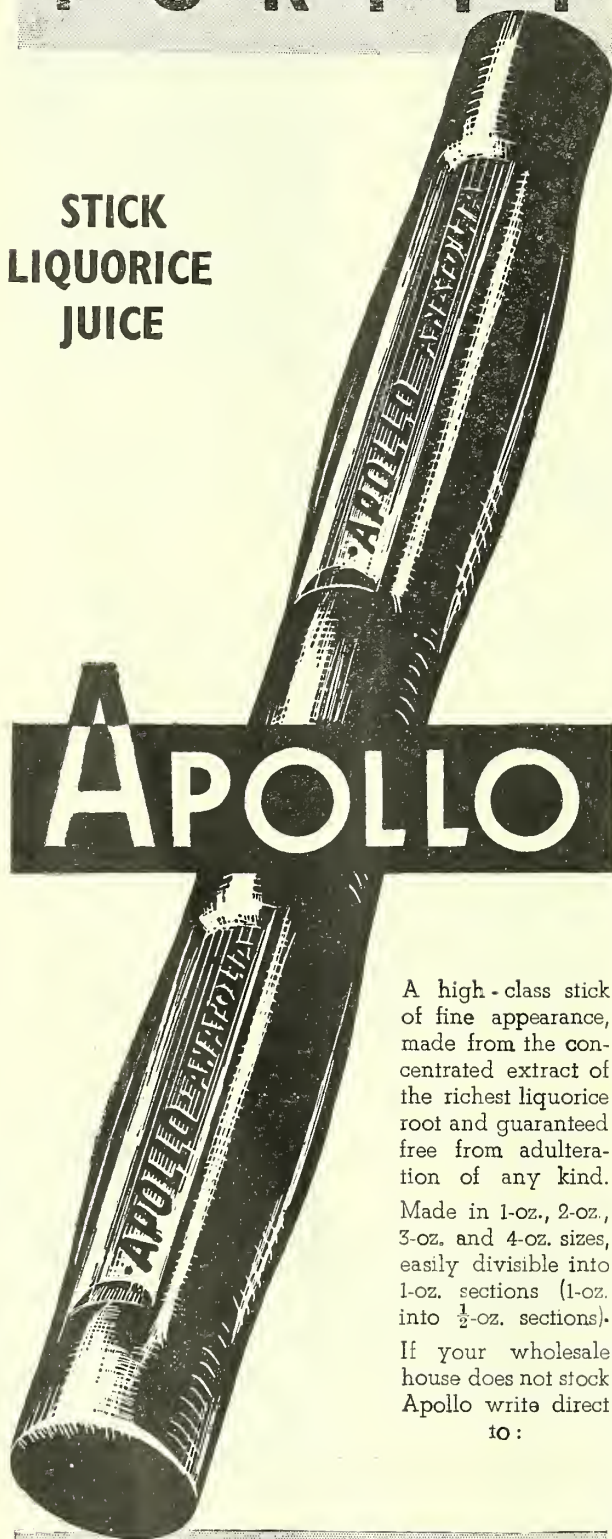
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1 doz. 4/6 " " " @ 40/6	0 10 2	0 13 6	
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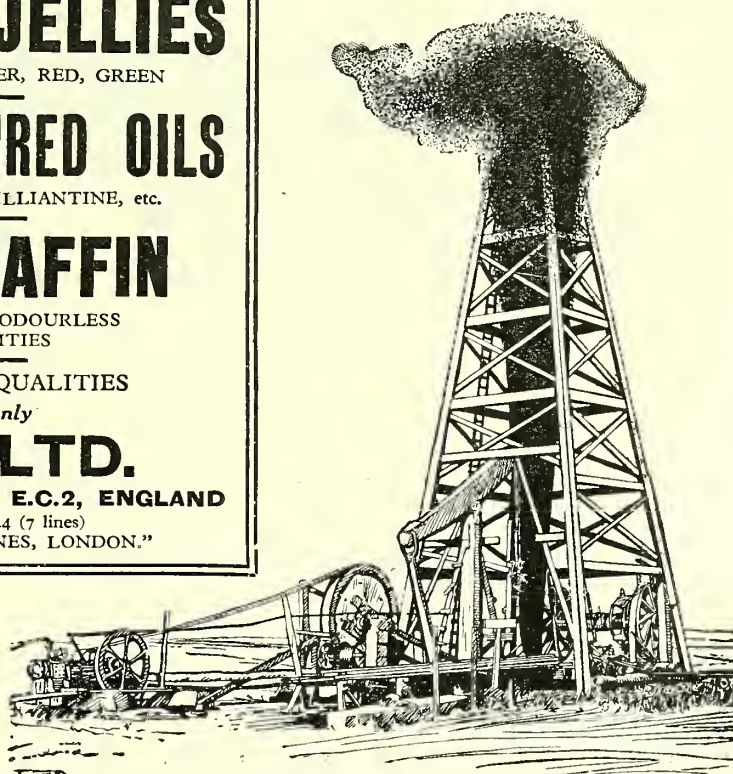
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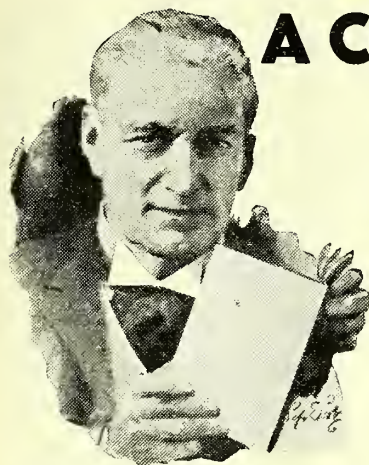


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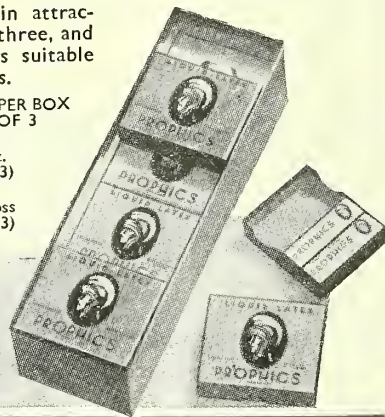
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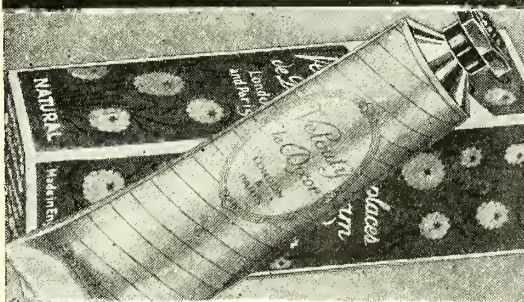
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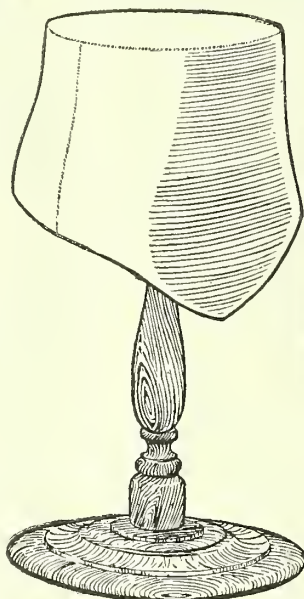
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BELTRUSS, TWICKENHAM

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*Make a habit  
of saying*

**PRESTOBAND**  
*the self adhesive bandage*

*when your customers  
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**NOW**

- ★ Sold in attractive cartons.
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*Supplied through Wholesale Houses only.*

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THE SUPREME TONIC RESTORATIVE



This is an entirely different tonic wine highly recommended by the medical profession. It is a scientifically prepared restorative of matured wine, fresh eggs, etc. As a pleasing tonic and restorative it is unsurpassed and may be sold by all licensed chemists.

A PROFITABLE ALL - THE - YEAR - ROUND  
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*Write for details and prices*

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WRAPPED in plain brown  
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PACKED IN CARTONS  
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"CELTEX" SOLUBLE

6 for 6d. and 12 for 1 -  
1/2 · 1/6 · 2/-

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*The Chemist's Brand*  
**LIQUORICE JUICE**

**SOLAZZI JUICE IS GUARANTEED TO  
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EXTRACT OF FINEST CALABRIAN  
LICORICE ROOT  
WITHOUT ANY ADMIXTURE WHATEVER**

Should any enquiry as to the composition of SOLAZZI be received from the public, Chemists are asked to emphasise the fact that SOLAZZI is not included in the category of Secret Remedies, and that the accompanying guarantee obtains with every parcel.



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**Watersprite** Regd.  
MADE IN ENGLAND**NON-STRETCH FACE CLOTHS**in the NEW 2-colour CELLO WRAPPING will  
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Give prominence to G.218C, the popular

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SUITABLE FOR  
POISONOUS PILLS,  
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POWDERS. WIDE  
MOUTHED, WITH  
MOULDED CAPS

The illustration shows a few of an attractive line available in  $\frac{1}{2}$ , 1, 2, 3, 4, 6, 8, 10, 12, 16 and 20 oz. sizes.

We can also supply Narrow and Wide Mouth Poison Corbys to meet the requirements of the Poison Regulations (Pharmaceutical Poisons Act, 1933).

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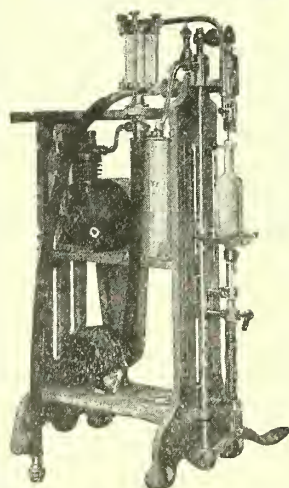
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Fills all sizes from  
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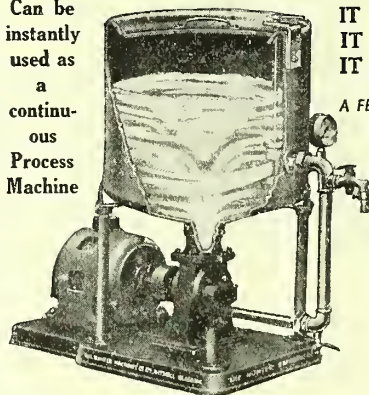
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**Roberts' Patent Filling Machine**  
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Makers of every description of Bottle Filling and Shallow  
Jar and Tin Filling Machine for the Chemists' use  
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a  
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LABORATORY MODEL TO MAKE  $\frac{1}{2}$  TO 1 PINT  
EMULSION.

THE HUNTER MACHINE CO., LTD., NITSHILL RD., GLASGOW



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We can offer quotations for . . .

**MEDICALS • PANELS • VIALS  
POISONS • CHELTENHAMS  
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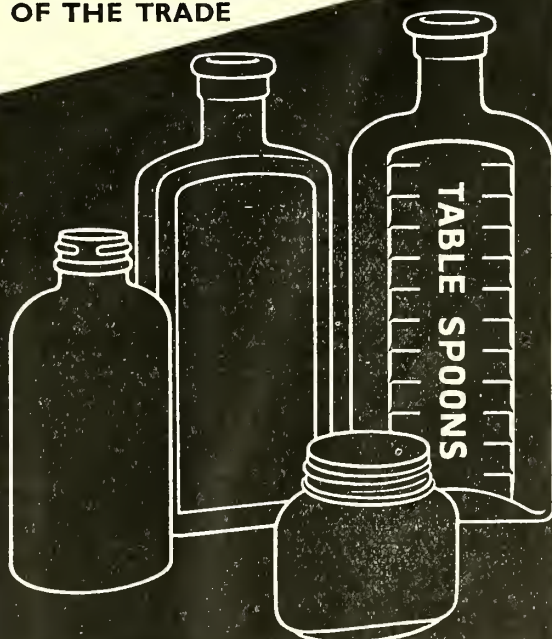
(Screw Cap or other closures)

\* SPECIAL DESIGNS PREPARED FOR PROPRIETARY PACKS

\* Prompt deliveries—Personal attention to all enquiries

**FOR OVER 80 YEARS WE HAVE BEEN MAKING  
BOTTLES OF EVERY DESCRIPTION. WE CAN  
PRODUCE ALL TYPES OF MACHINE MADE BOTTLES**

**TO MEET THE VARIED  
REQUIREMENTS  
OF THE TRADE**



**FREDERICK HAMPSON LTD**

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*with coal-tar  
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WEST CUMBERLAND offers you the following exceptional advantages if you select it as a location for your new factory :

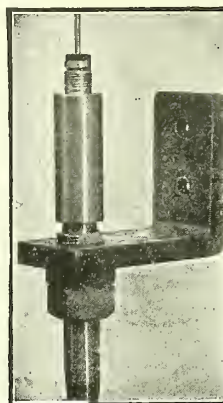
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**NEW HANDBOOK** setting out the Trading Estate facilities available in West Cumberland has just been produced, and will be sent to those applying for information.



## SPRINKLER BOTTLES

### Automatic Rinsing

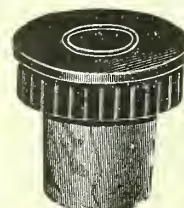
Can be connected to the town's water supply by metal or india rubber hose pipe.

By merely passing the mouth of the bottle over the jet and pressing the bottle downwards water is automatically sprayed into the bottle. The water completely drains away from the bottle as it is withdrawn.

Further particulars may be obtained from the makers:—

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COMPOSITION STOPPERS  
BAKELITE MOULDINGS  
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200 Varieties  
Any Colour.

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Three months Revision Courses P.S. and C. and D.  
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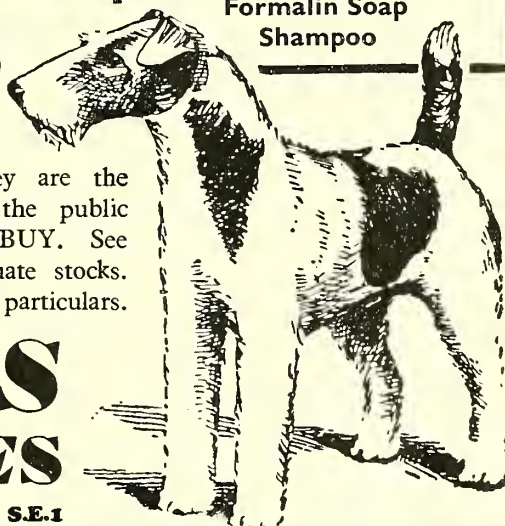
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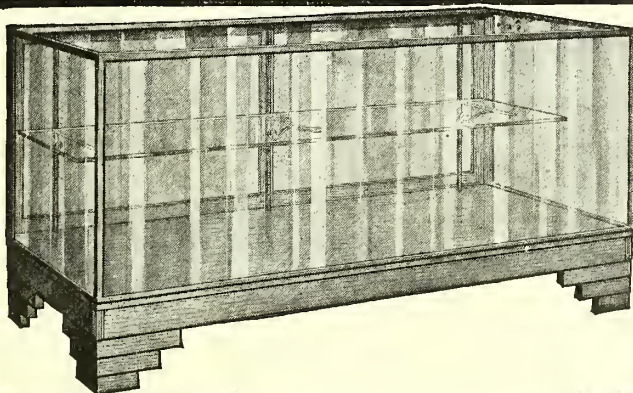
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## THESE DISPLAYS

will link you up with the vast 'ASPRO'-buying public.



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BONUS ON 5's & 10's ...	One gross order ...	Bonus 1 dozen packets
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Half gross of either size is the minimum order accepted for bonus purposes.		
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Quarter gross is the minimum quantity. NO BONUS ON 60's.

**BONUS CONDITIONS.**—The only conditions made are that the Chemist who buys on these terms undertakes to show 'ASPRO' advertising matter in his shop window for 14 days and sell at advertised prices. Acceptance of Bonus is considered acceptance of conditions regarding display and selling prices.

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No proprietary right is claimed in the method of manufacture or the formula.

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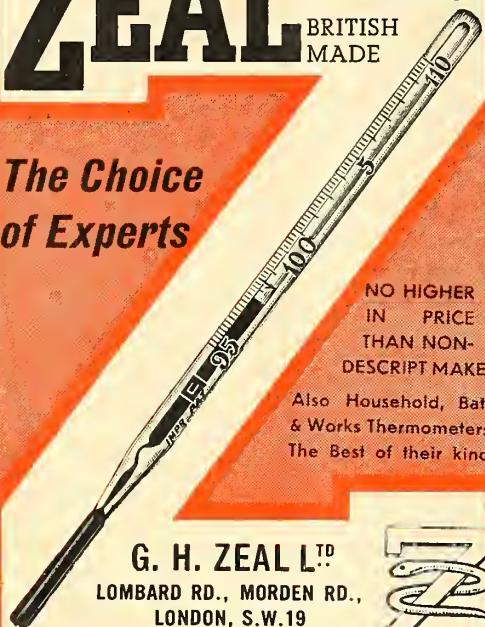




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